

SEQUENCE LISTING

- - (i) APPLICANT: HUSE, WILLIAM D.
 - (±i) TITLE OF INVENTION: SURFACE EXPRESSION LIBRARIES OF HETEROMERIC RECEPTORS
- (iii) NUMBER OF SEQUENCES: 76
 - (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: McDermott Will & Emery
 - (B) STREET: 4370 LA JOLLA VILLAGE DRIVE, SUITE 700
 - (C) CITY: SAN DIEGO
 (D) STATE: CALIFORNIA
 - (E) COUNTRY: UNITED STATES
 - (F) ZIP: 92122
 - (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
 - (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: 10/767,869
 - (B) FILING DATE: January 28, 2004
 - (C) CLASSIFICATION:
 - (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Gay, David A.
 - (B) REGISTRATION NUMBER: 39,200
 - (C) REFERENCE/DOCKET NUMBER: 66797-397
 - (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: 619-535-9001
 - (B) TELEFAX: 619-535-8949
- (2) INFORMATION FOR SEQ ID NO:1:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7445 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: both
 - (D) TOPOLOGY: circular
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

AATGCTACTA	CTATTAGTAG	AATTGATGCC	ACCTTTTCAG	CTCGCGCCCC	AAATGAAAAT	60
ATAGCTAAAC	AGGTTATTGA	CCATTTGCGA	AATGTATCTA	ATGGTCAAAC	TAAATCTACT	120
CGTTCGCAGA	ATTGGGAATC	AACTGTTACA	TGGAATGAAA	CTTCCAGACA	CCGTACTTTA	180
GTTGCATATT	TAAAACATGT	TGAGCTACAG	CACCAGATTC	AGCAATTAAG	CTCTAAGCCA	240
TCTGCAAAAA	TGACCTCTTA	TCAAAAGGAG	CAATTAAAGG	TACTCTCTAA	TCCTGACCTG	300
TTGGAGTTTG	CTTCCGGTCT	GGTTCGCTTT	GAAGCTCGAA	TTAAAACGCG	ATATTTGAAG	360
TCTTTCGGGC	TTCCTCTTAA	TCTTTTTGAT	GCAATCCGCT	TTGCTTCTGA	CTATAATAGT	420
CAGGGTAAAG	ACCTGATTTT	TGATTTATGG	TCATTCTCGT	TTTCTGAACT	GTTTAAAGCA	480
TTTGAGGGGG	ATTCAATGAA	TATTTATGAC	GATTCCGCAG	TATTGGACGC	TATCCAGTCT	540
AAACATTTTA	CTATTACCCC	CTCTGGCAAA	ACTTCTTTTG	CAAAAGCCTC	TCGCTATTTT	600

GGTTTTTATC	GTCGTCTGGT	AAACGAGGGT	TATGATAGTG	TTGCTCTTAC	TATGCCTCGT	660
AATTCCTTTT	GGCGTTATGT	ATCTGCATTA	GTTGAATGTG	GTATTCCTAA	ATCTCAACTG	720
ATGAATCTTT	CTACCTGTAA	TAATGTTGTT	CCGTTAGTTC	GTTTTATTAA	CGTAGATTTT	780
TCTTCCCAAC	GTCCTGACTG	GTATAATGAG	CCAGTTCTTA	AAATCGCATA	AGGTAATTCA	840
CAATGATTAA	AGTTGAAATT	AAACCATCTC	AAGCCCAATT	TACTACTCGT	TCTGGTGTTT	900
CTCGTCAGGG	CAAGCCTTAT	TCACTGAATG	AGCAGCTTTG	TTACGTTGAT	TTGGGTAATG	960
AATATCCGGT	TCTTGTCAAG	ATTACTCTTG	ATGAAGGTCA	GCCAGCCTAT	GCGCCTGGTC	1020
TGTACACCGT	TCATCTGTCC	TCTTTCAAAG	TTGGTCAGTT	CGGTTCCCTT	ATGATTGACC	1080
GTCTGCGCCT	CGTTCCGGCT	AAGTAACATG	GAGCAGGTCG	CGGATTTCGA	CACAATTTAT	1140
CAGGCGATGA	TACAAATCTC	CGTTGTACTT	TGTTTCGCGC	TTGGTATAAT	CGCTGGGGGT	1200
CAAAGATGAG	TGTTTTAGTG	TATTCTTTCG	CCTCTTTCGT	TTTAGGTTGG	TGCCTTCGTA	1260
GTGGCATTAC	GTATTTTACC	CGTTTAATGG	AAACTTCCTC	ATGAAAAAGT	CTTTAGTCCT	1320
CAAAGCCTCT	GTAGCCGTTG	CTACCCTCGT	TCCGATGCTG	TCTTTCGCTG	CTGAGGGTGA	1380
CGATCCCGCA	AAAGCGGCCT	TTAACTCCCT	GCAAGCCTCA	GCGACCGAAT	ATATCGGTTA	1440
TGCGTGGGCG	ATGGTTGTTG	TCATTGTCGG	CGCAACTATC	GGTATCAAGC	TGTTTAAGAA	1500
ATTCACCTCG	AAAGCAAGCT	GATAAACCGA	TACAATTAAA	GGCTCCTTTT	GGAGCCTTTT	1560
TTTTTGGAGA	TTTTCAACGT	GAAAAAATTA	TTATTCGCAA	TTCCTTTAGT	TGTTCCTTTC	1620
TATTCTCACT	CCGCTGAAAC	TGTTGAAAGT	TGTTTAGCAA	AACCCCATAC	AGAAAATTCA	1680
TTTACTAACG	TCTGGAAAGA	CGACAAAACT	TTAGATCGTT	ACGCTAACTA	TGAGGGTTGT	1740
CTGTGGAATG	CTACAGGCGT	TGTAGTTTGT	ACTGGTGACG	AAACTCAGTG	TTACGGTACA	1800
			AATGAGGGTG		GGGTGGCGGT	1860
TCTGAGGGTG	GCGGTTCTGA	GGGTGGCGGT	ACTAAACCTC	CTGAGTACGG	TGATACACCT	1920
ATTCCGGGCT	ATACTTATAT	CAACCCTCTC	GACGGCACTT	ATCCGCCTGG	TACTGAGCAA	1980
AACCCCGCTA	ATCCTAATCC	TTCTCTTGAG	GAGTCTCAGC	CTCTTAATAC	TTTCATGTTT	2040
CAGAATAATA	GGTTCCGAAA	TAGGCAGGGG	GCATTAACTG	TTTATACGGG	CACTGTTACT	2100
CAAGGCACTG	ACCCCGTTAA	AACTTATTAC	CAGTACACTC	CTGTATCATC	AAAAGCCATG	2160
TATGACGCTT	ACTGGAACGG	TAAATTCAGA	GACTGCGCTT	TCCATTCTGG	CTTTAATGAA	2220
GATCCATTCG	TTTGTGAATA	TCAAGGCCAA	TCGTCTGACC	TGCCTCAACC	TCCTGTCAAT	2280
GCTGGCGGCG	GCTCTGGTGG	TGGTTCTGGT	GGCGGCTCTG	AGGGTGGTGG	CTCTGAGGGT	2340
			GGCGGTTCCG			2400
GATTTTGATT	ATGAAAAGAT	GGCAAACGCT	AATAAGGGGG	CTATGACCGA	AAATGCCGAT	2460
GAAAACGCGC	TACAGTCTGA	CGCTAAAGGC	AAACTTGATT	CTGTCGCTAC	TGATTACGGT	2520
GCTGCTATCG	ATGGTTTCAT	TGGTGACGTT	TCCGGCCTTG	CTAATGGTAA	TGGTGCTACT	2580
GGTGATTTTG	CTGGCTCTAA	TTCCCAAATG	GCTCAAGTCG	GTGACGGTGA	TAATTCACCT	2640
TTAATGAATA	ATTTCCGTCA	ATATTTACCT	TCCCTCCCTC	AATCGGTTGA	ATGTCGCCCT	2700
TTTGTCTTTA	GCGCTGGTAA	ACCATATGAA	TTTTCTATTG	ATTGTGACAA	AATAAACTTA	2760
TTCCGTGGTG	TCTTTGCGTT	TCTTTTATAT	GTTGCCACCT	TTATGTATGT	ATTTTCTACG	2820
TTTGCTAACA	TACTGCGTAA	TAAGGAGTCT	TAATCATGCC	AGTTCTTTTG	GGTATTCCGT	2880
TATTATTGCG	TTTCCTCGGT	TTCCTTCTGG	TAACTTTGTT	CGGCTATCTG	CTTACTTTTC	2940
TTAAAAAGGG	CTTCGGTAAG	ATAGCTATTG	CTATTTCATT	GTTTCTTGCT	CTTATTATTG	3000
			CTGATATTAG			3060
			CTAATGCGCT			3120
TCTCTGTAAA	GGCTGCTATT	TTCATTTTTG	ACGTTAAACA	AAAAATCGTT	TCTTATTTGG	3180
ATTGGGATAA	ATAATATGGC	TGTTTATTTT	GTAACTGGCA	AATTAGGCTC	TGGAAAGACG	3240
			ATTGTAGCTG			3300
			GTCGGGAGGT			3360
			GATTTGCTTG			3420
TCCTACGATG	AAAATAAAA	CGGCTTGCTT	GTTCTCGATG	AGTGCGGTAC	TTGGTTTAAT	3480
			CCGATTATTG			3540
			CAGGACTTAT			3600
			TGTCGTCGTC			3660
			GGCTCGAAAA			3720
			TTAAGCCCTA			3780
			ACTAAACAGG			3840
			TTATCACACG			3900
			ATATATTTGA			3960
			ACATATAGTT			4020

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GAGGTTAAAA	AGGTAGTCTC	TCAGACCTAT	GATTTTGATA	AATTCACTAT	TGACTCTTCT	4080
CAGCGTCTTA	ATCTAAGCTA	TCGCTATGTT	TTCAAGGATT	CTAAGGGAAA	ATTAATTAAT	4140
AGCGACGATT	TACAGAAGCA	AGGTTATTCA	CTCACATATA	TTGATTTATG	TACTGTTTCC	4200
ATTAAAAAAG	GTAATTCAAA	TGAAATTGTT	AAATGTAATT	AATTTTGTTT	TCTTGATGTT	4260
TGTTTCATCA	TCTTCTTTTG	CTCAGGTAAT	TGAAATGAAT	AATTCGCCTC	TGCGCGATTT	4320
				GTTTCTCCCG		4380
				CTACGCAATT		4440
				CCTTCCATAA		4500
				TCTGATAATC		4560
				AATGATAATG		4620
				GTTGTCGAAT		4680
				GGCTCTAATC		4740
				CTTTCTACTG		4800
				CAGCAAGGTG		4860
				GGCGGTGTTA		4920
				ATTTTTAATG		4980
AGGGCTATCA	GTTCGCGCAT	TAAAGACTAA	TAGCCATTCA	AAAATATTGT	CTGTGCCACG	5040
TATTCTTACG	CTTTCAGGTC	AGAAGGGTTC	TATCTCTGTT	GGCCAGAATG	TCCCTTTTAT	5100
TACTGGTCGT	GTGACTGGTG	AATCTGCCAA	TGTAAATAAT	CCATTTCAGA	CGATTGAGCG	5160
TCAAAATGTA	GGTATTTCCA	TGAGCGTTTT	TCCTGTTGCA	ATGGCTGGCG	GTAATATTGT	5220
TCTGGATATT	ACCAGCAAGG	CCGATAGTTT	GAGTTCTTCT	ACTCAGGCAA	GTGATGTTAT	5280
TACTAATCAA	AGAAGTATTG	CTACAACGGT	TAATTTGCGT	GATGGACAGA	CTCTTTTACT	5340
CGGTGGCCTC	ACTGATTATA	AAAACACTTC	TCAAGATTCT	GGCGTACCGT	TCCTGTCTAA	5400
AATCCCTTTA	ATCGGCCTCC	TGTTTAGCTC	CCGCTCTGAT	TCCAACGAGG	AAAGCACGTT	5460
ATACGTGCTC	GTCAAAGCAA	CCATAGTACG	CGCCCTGTAG	CGGCGCATTA	AGCGCGGCGG	5520
GTGTGGTGGT	TACGCGCAGC	GTGACCGCTA	CACTTGCCAG	CGCCCTAGCG	CCCGCTCCTT	5580
TCGCTTTCTT	CCCTTCCTTT	CTCGCCACGT	TCGCCGGCTT	TCCCCGTCAA	GCTCTAAATC	5640
				CCTCGACCCC		5700
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				AACTGGAACA		5820
CTATCTCGGG	CTATTCTTTT	GATTTATAAG	GGATTTTGCC	GATTTCGGAA	CCACCATCAA	5880
ACAGGATTTT	CGCCTGCTGG	GGCAAACCAG	CGTGGACCGC	TTGCTGCAAC	TCTCTCAGGG	5940
CCAGGCGGTG	AAGGGCAATC	AGCTGTTGCC	CGTCTCGCTG	GTGAAAAGAA	AAACCACCCT	6000
GGCGCCCAAT	ACGCAAACCG	CCTCTCCCCG	CGCGTTGGCC	GATTCATTAA	TGCAGCTGGC	6060
ACGACAGGTT	TCCCGACTGG	AAAGCGGGCA	GTGAGCGCAA	CGCAATTAAT	GTGAGTTAGC	6120
TCACTCATTA	GGCACCCCAG	GCTTTACACT	TTATGCTTCC	GGCTCGTATG	TTGTGTGGAA	6180
TTGTGAGCGG	ATAACAATTT	CACACGCGTC	ACTTGGCACT	GGCCGTCGTT	TTACAACGTC	6240
GTGACTGGGA	AAACCCTGGC	GTTACCCAAG	CTTTGTACAT	GGAGAAAATA	AAGTGAAACA	6300
				TTTACCCCTG		6360
				GGGGATTGTA		6420
				AGTTTACAGG		6480
				GTTGGTGCTA		6540
				ATAGCGAAGA		6600
				GGCGCTTTGC		6660
				TTCCTGAGGC		6720
				CCATCTACAC		6780
				ATCCGACGG		6840
				AGACGCGAAT		6900
				ATTTAACGCG		6960
				CTTCCTGTTT		7020
				TTTACGATTA		7080
				AGCCTTTGTA		7140
				GGTTGAATAT		7200
				TTTACCTACA		7260
				TCCTTGCGTT		7320
				TACAACCGAT		7380
GCTCTGAGGC	TTTATTGCTT	AATTTTGCTA	ATTCTTTGCC	TTGCCTGTAT	GATTTATTGG	7440

ACGTT 7445

- (2) INFORMATION FOR SEQ ID NO:2:
 - (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7317 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: both
 - (D) TOPOLOGY: circular
 - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

AATGCTACTA	CTATTAGTAG	AATTGATGCC	ACCTTTTCAG	CTCGCGCCCC	AAATGAAAAT	60
ATAGCTAAAC	AGGTTATTGA	CCATTTGCGA	AATGTATCTA	ATGGTCAAAC	TAAATCTACT	120
CGTTCGCAGA	ATTGGGAATC	AACTGTTACA	TGGAATGAAA	CTTCCAGACA	CCGTACTTTA	180
GTTGCATATT	TAAAACATGT	TGAGCTACAG	CACCAGATTC	AGCAATTAAG	CTCTAAGCCA	240
TCCGCAAAAA	TGACCTCTTA	TCAAAAGGAG	CAATTAAAGG	TACTCTCTAA	TCCTGACCTG	300
TTGGAGTTTG	CTTCCGGTCT	GGTTCGCTTT	GAAGCTCGAA	TTAAAACGCG	ATATTTGAAG	360
TCTTTCGGGC	TTCCTCTTAA	TCTTTTTGAT	GCAATCCGCT	TTGCTTCTGA	CTATAATAGT	420
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				TATTGGACGC		540
				CAAAAGCCTC		600
				TTGCTCTTAC		660
				GTATTCCTAA		720
				GTTTTATTAA		780
				AAATCGCATA		840
		AAACCATCTC		TACTACTCGT		900
				TTACGTTGAT		960
				GCCAGCCTAT		1020
				CGGTTCCCTT		1020
				CGGATTTCGA		1140
				TTGGTATAAT		1200
				TTTAGGTTTGG		1260
				ATGAAAAAGT		1320
_		_		TCTTTCGCTG		1380
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				GGTATCAAGC		1560
				GGCTCCTTTT		1620
						1680
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				ACGCTAACTA		1740
				AAACTCAGTG		1800
				GTGGCTCTGA		1860
				CTGAGTACGG	_	1920
				ATCCGCCTGG		1980
				CTCTTAATAC		2040
			· · · - · - ·	TTTATACGGG		2100
				CTGTATCATC		2160
				TCCATTCTGG		2220
				TGCCTCAACC		2280
GCTGGCGGCG	GCTCTGGTGG	TGGTTCTGGT	GGCGGCTCTG	AGGGTGGTGG	CTCTGAGGGT	2340
				GTGGTGGCTC		2400
				CTATGACCGA		2460
GAAAACGCGC	TACAGTCTGA	CGCTAAAGGC	AAACTTGATT	CTGTCGCTAC	TGATTACGGT	2520
				CTAATGGTAA		2580
GGTGATTTTG	CTGGCTCTAA	TTCCCAAATG	GCTCAAGTCG	GTGACGGTGA	TAATTCACCT	2640
				AATCGGTTGA		2700
TTTGTCTTTA	GCGCTGGTAA	ACCATATGAA	TTTTCTATTG	ATTGTGACAA	AATAAACTTA	2760
TTCCGTGGTG	TCTTTGCGTT	TCTTTTATAT	GTTGCCACCT	TTATGTATGT	ATTTTCTACG	2820

TTTGCTAACA TACTGCGTAA TAAGGAGTCT TAATCATGCC AGTTCTTTTG GGTATTCCGT 2880 TATTATTGCG TTTCCTCGGT TTCCTTCTGG TAACTTTGTT CGGCTATCTG CTTACTTTTC 2940 TTAAAAAGGG CTTCGGTAAG ATAGCTATTG CTATTTCATT GTTTCTTGCT CTTATTATTG 3000 GGCTTAACTC AATTCTTGTG GGTTATCTCT CTGATATTAG CGCTCAATTA CCCTCTGACT 3060 TTGTTCAGGG TGTTCAGTTA ATTCTCCCGT CTAATGCGCT TCCCTGTTTT TATGTTATTC 3120 TCTCTGTAAA GGCTGCTATT TTCATTTTTG ACGTTAAACA AAAAATCGTT TCTTATTTGG 3180 ATTGGGATAA ATAATATGGC TGTTTATTTT GTAACTGGCA AATTAGGCTC TGGAAAGACG 3240 CTCGTTAGCG TTGGTAAGAT TCAGGATAAA ATTGTAGCTG GGTGCAAAAT AGCAACTAAT 3300 CTTGATTTAA GGCTTCAAAA CCTCCCGCAA GTCGGGAGGT TCGCTAAAAC GCCTCGCGTT 3360 CTTAGAATAC CGGATAAGCC TTCTATATCT GATTTGCTTG CTATTGGGCG CGGTAATGAT 3420 TCCTACGATG AAAATAAAAA CGGCTTGCTT GTTCTCGATG AGTGCGGTAC TTGGTTTAAT 3480 ACCCGTTCTT GGAATGATAA GGAAAGACAG CCGATTATTG ATTGGTTTCT ACATGCTCGT 3540 AAATTAGGAT GGGATATTAT TTTTCTTGTT CAGGACTTAT CTATTGTTGA TAAACAGGCG CGTTCTGCAT TAGCTGAACA TGTTGTTTAT TGTCGTCGTC TGGACAGAAT TACTTTACCT 3660 TTTGTCGGTA CTTTATATTC TCTTATTACT GGCTCGAAAA TGCCTCTGCC TAAATTACAT 3720 GTTGGCGTTG TTAAATATGG CGATTCTCAA TTAAGCCCTA CTGTTGAGCG TTGGCTTTAT 3780 ACTGGTAAGA ATTTGTATAA CGCATATGAT ACTAAACAGG CTTTTTCTAG TAATTATGAT 3840 TCCGGTGTTT ATTCTTATTT AACGCCTTAT TTATCACACG GTCGGTATTT CAAACCATTA 3900 AATTTAGGTC AGAAGATGAA GCTTACTAAA ATATATTTGA AAAAGTTTTC ACGCGTTCTT 3960 TGTCTTGCGA TTGGATTTGC ATCAGCATTT ACATATAGTT ATATAACCCA ACCTAAGCCG 4020 GAGGTTAAAA AGGTAGTCTC TCAGACCTAT GATTTTGATA AATTCACTAT TGACTCTTCT 4080 CAGCGTCTTA ATCTAAGCTA TCGCTATGTT TTCAAGGATT CTAAGGGAAA ATTAATTAAT 4140 AGCGACGATT TACAGAAGCA AGGTTATTCA CTCACATATA TTGATTTATG TACTGTTTCC 4200 ATTAAAAAG GTAATTCAAA TGAAATTGTT AAATGTAATT AATTTTGTTT TCTTGATGTT 4260 TGTTTCATCA TCTTCTTTTG CTCAGGTAAT TGAAATGAAT AATTCGCCTC TGCGCGATTT 4320 TGTAACTTGG TATTCAAAGC AATCAGGCGA ATCCGTTATT GTTTCTCCCG ATGTAAAAGG 4380 TACTGTTACT GTATATTCAT CTGACGTTAA ACCTGAAAAT CTACGCAATT TCTTTATTTC 4440 TGTTTTACGT GCTAATAATT TTGATATGGT TGGTTCAATT CCTTCCATAA TTCAGAAGTA TAATCCAAAC AATCAGGATT ATATTGATGA ATTGCCATCA TCTGATAATC AGGAATATGA 4560 TGATAATTCC GCTCCTTCTG GTGGTTTCTT TGTTCCGCAA AATGATAATG TTACTCAAAC 4620 TTTTAAAATT AATAACGTTC GGGCAAAGGA TTTAATACGA GTTGTCGAAT TGTTTGTAAA 4680 GTCTAATACT TCTAAATCCT CAAATGTATT ATCTATTGAC GGCTCTAATC TATTAGTTGT 4740 TAGTGCACCT AAAGATATTT TAGATAACCT TCCTCAATTC CTTTCTACTG TTGATTTGCC 4800 AACTGACCAG ATATTGATTG AGGGTTTGAT ATTTGAGGTT CAGCAAGGTG ATGCTTTAGA 4860 TTTTTCATTT GCTGCTGGCT CTCAGCGTGG CACTGTTGCA GGCGGTGTTA ATACTGACCG 4920 CCTCACCTCT GTTTTATCTT CTGCTGGTGG TTCGTTCGGT ATTTTTAATG GCGATGTTTT 4980 AGGGCTATCA GTTCGCGCAT TAAAGACTAA TAGCCATTCA AAAATATTGT CTGTGCCACG 5040 TATTCTTACG CTTTCAGGTC AGAAGGGTTC TATCTCTGTT GGCCAGAATG TCCCTTTTAT 5100 TACTGGTCGT GTGACTGGTG AATCTGCCAA TGTAAATAAT CCATTTCAGA CGATTGAGCG 5160 TCAAAATGTA GGTATTTCCA TGAGCGTTTT TCCTGTTGCA ATGGCTGGCG GTAATATTGT 5220 TCTGGATATT ACCAGCAAGG CCGATAGTTT GAGTTCTTCT ACTCAGGCAA GTGATGTTAT 5280 TACTAATCAA AGAAGTATTG CTACAACGGT TAATTTGCGT GATGGACAGA CTCTTTTACT 5340 CGGTGGCCTC ACTGATTATA AAAACACTTC TCAAGATTCT GGCGTACCGT TCCTGTCTAA AATCCCTTTA ATCGGCCTCC TGTTTAGCTC CCGCTCTGAT TCCAACGAGG AAAGCACGTT 5460 ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTGTAG CGGCGCATTA AGCGCGGCGG 5520 GTGTGGTGGT TACGCGCAGC GTGACCGCTA CACTTGCCAG CGCCCTAGCG CCCGCTCCTT 5580 TCGCTTTCTT CCCTTCCTTT CTCGCCACGT TCGCCGGCTT TCCCCGTCAA GCTCTAAATC 5640 GGGGGCTCCC TTTAGGGTTC CGATTTAGTG CTTTACGGCA CCTCGACCCC AAAAAACTTG 5700 ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCCTTTGA 5760 CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTTT GATTTATAAG GGATTTTGCC GATTTCGGAA CCACCATCAA 5880 ACAGGATTTT CGCCTGCTGG GGCAAACCAG CGTGGACCGC TTGCTGCAAC TCTCTCAGGG 5940 CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTCGCTG GTGAAAAGAA AAACCACCCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT GTGAGTTAGC 6120 TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGTGGAA 6180 TTGTGAGCGG ATAACAATTT CACACGCCAA GGAGACAGTC ATAATGAAAT ACCTATTGCC 6240

TACGGCAGCC GCTGGATTGT TATTACTCGC TGCCCAACCA GCCATGGCCG AGCTCGTGAT 6300 GACCCAGACT CCAGATATCC AACAGGAATG AGTGTTAATT CTAGAACGCG TCACTTGGCA 6360 CTGGCCGTCG TTTTACAACG TCGTGACTGG GAAAACCCTG GCGTTACCCA AGCTTAATCG 6420 CCTTGCAGAA TTCCCTTTCG CCAGCTGGCG TAATAGCGAA GAGGCCCGCA CCGATCGCCC 6480 TTCCCAACAG TTGCGCAGCC TGAATGGCGA ATGGCGCTTT GCCTGGTTTC CGGCACCAGA 6540 AGCGGTGCCG GAAAGCTGGC TGGAGTGCGA TCTTCCTGAG GCCGATACGG TCGTCGTCCC 6600 CTCAAACTGG CAGATGCACG GTTACGATGC GCCCATCTAC ACCAACGTAA CCTATCCCAT TACGGTCAAT CCGCCGTTTG TTCCCACGGA GAATCCGACG GGTTGTTACT CGCTCACATT 6720 TAATGTTGAT GAAAGCTGGC TACAGGAAGG CCAGACGCGA ATTATTTTTG ATGGCGTTCC 6780 TATTGGTTAA AAAATGAGCT GATTTAACAA AAATTTAACG CGAATTTTAA CAAAATATTA 6840 ACGTTTACAA TTTAAATATT TGCTTATACA ATCTTCCTGT TTTTGGGGCT TTTCTGATTA 6900 TCAACCGGGG TACATATGAT TGACATGCTA GTTTTACGAT TACCGTTCAT CGATTCTCTT 6960 GTTTGCTCCA GACTCTCAGG CAATGACCTG ATAGCCTTTG TAGATCTCTC AAAAATAGCT 7020 ACCCTCTCCG GCATTAATTT ATCAGCTAGA ACGGTTGAAT ATCATATTGA TGGTGATTTG 7080 ACTGTCTCCG GCCTTTCTCA CCCTTTTGAA TCTTTACCTA CACATTACTC AGGCATTGCA 7140 TTTAAAATAT ATGAGGGTTC TAAAAATTTT TATCCTTGCG TTGAAATAAA GGCTTCTCCC 7200 GCAAAAGTAT TACAGGGTCA TAATGTTTTT GGTACAACCG ATTTAGCTTT ATGCTCTGAG 7260 GCTTTATTGC TTAATTTTGC TAATTCTTTG CCTTGCCTGT ATGATTTATT GGATGTT 7317

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7729 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: both

(D) TOPOLOGY: circular

(xi) SEOUENCE DESCRIPTION: SEO ID NO:3:

AATGCTACTA CTATTAGTAG AATTGATGCC ACCTTTTCAG CTCGCGCCCC AAATGAAAAT 60 ATAGCTAAAC AGGTTATTGA CCATTTGCGA AATGTATCTA ATGGTCAAAC TAAATCTACT 120 CGTTCGCAGA ATTGGGAATC AACTGTTACA TGGAATGAAA CTTCCAGACA CCGTACTTTA 180 GTTGCATATT TAAAACATGT TGAGCTACAG CACCAGATTC AGCAATTAAG CTCTAAGCCA 240 300 TCTGCAAAAA TGACCTCTTA TCAAAAGGAG CAATTAAAGG TACTCTCTAA TCCTGACCTG TTGGAGTTTG CTTCCGGTCT GGTTCGCTTT GAAGCTCGAA TTAAAACGCG ATATTTGAAG 360 TCTTTCGGGC TTCCTCTTAA TCTTTTTGAT GCAATCCGCT TTGCTTCTGA CTATAATAGT 420 CAGGGTAAAG ACCTGATTTT TGATTTATGG TCATTCTCGT TTTCTGAACT GTTTAAAGCA 480 TTTGAGGGGG ATTCAATGAA TATTTATGAC GATTCCGCAG TATTGGACGC TATCCAGTCT 540 AAACATTTTA CTATTACCCC CTCTGGCAAA ACTTCTTTTG CAAAAGCCTC TCGCTATTTT 600 GGTTTTTATC GTCGTCTGGT AAACGAGGGT TATGATAGTG TTGCTCTTAC TATGCCTCGT 660 AATTCCTTTT GGCGTTATGT ATCTGCATTA GTTGAATGTG GTATTCCTAA ATCTCAACTG 720 ATGAATCTTT CTACCTGTAA TAATGTTGTT CCGTTAGTTC GTTTTATTAA CGTAGATTTT 780 TCTTCCCAAC GTCCTGACTG GTATAATGAG CCAGTTCTTA AAATCGCATA AGGTAATTCA 840 CAATGATTAA AGTTGAAATT AAACCATCTC AAGCCCAATT TACTACTCGT TCTGGTGTTT 900 CTCGTCAGGG CAAGCCTTAT TCACTGAATG AGCAGCTTTG TTACGTTGAT TTGGGTAATG 960 AATATCCGGT TCTTGTCAAG ATTACTCTTG ATGAAGGTCA GCCAGCCTAT GCGCCTGGTC 1020 TGTACACCGT TCATCTGTCC TCTTTCAAAG TTGGTCAGTT CGGTTCCCTT ATGATTGACC 1080 GTCTGCGCCT CGTTCCGGCT AAGTAACATG GAGCAGGTCG CGGATTTCGA CACAATTTAT 1140 CAGGCGATGA TACAAATCTC CGTTGTACTT TGTTTCGCGC TTGGTATAAT CGCTGGGGGT 1200 CAAAGATGAG TGTTTTAGTG TATTCTTTCG CCTCTTTCGT TTTAGGTTGG TGCCTTCGTA 1260 GTGGCATTAC GTATTTTACC CGTTTAATGG AAACTTCCTC ATGAAAAAGT CTTTAGTCCT 1320 CAAAGCCTCT GTAGCCGTTG CTACCCTCGT TCCGATGCTG TCTTTCGCTG CTGAGGGTGA 1380 CGATCCCGCA AAAGCGGCCT TTAACTCCCT GCAAGCCTCA GCGACCGAAT ATATCGGTTA 1440 TGCGTGGGCG ATGGTTGTTG TCATTGTCGG CGCAACTATC GGTATCAAGC TGTTTAAGAA 1500 ATTCACCTCG AAAGCAAGCT GATAAACCGA TACAATTAAA GGCTCCTTTT GGAGCCTTTT TTTTTGGAGA TTTTCAACGT GAAAAAATTA TTATTCGCAA TTCCTTTAGT TGTTCCTTTC 1620 TATTCTCACT CCGCTGAAAC TGTTGAAAGT TGTTTAGCAA AACCCCATAC AGAAAATTCA 1680 TTTACTAACG TCTGGAAAGA CGACAAAACT TTAGATCGTT ACGCTAACTA TGAGGGTTGT 1740

CTGTGGAATG CTACAGGCGT TGTAGTTTGT ACTGGTGACG AAACTCAGTG TTACGGTACA TGGGTTCCTA TTGGGCTTGC TATCCCTGAA AATGAGGGTG GTGGCTCTGA GGGTGGCGGT 1860 TCTGAGGGTG GCGGTTCTGA GGGTGGCGGT ACTAAACCTC CTGAGTACGG TGATACACCT 1920 ATTCCGGGCT ATACTTATAT CAACCCTCTC GACGCACTT ATCCGCCTGG TACTGAGCAA AACCCCGCTA ATCCTAATCC TTCTCTTGAG GAGTCTCAGC CTCTTAATAC TTTCATGTTT CAGAATAATA GGTTCCGAAA TAGGCAGGGG GCATTAACTG TTTATACGGG CACTGTTACT 2100 CAAGGCACTG ACCCCGTTAA AACTTATTAC CAGTACACTC CTGTATCATC AAAAGCCATG 2160 TATGACGCTT ACTGGAACGG TAAATTCAGA GACTGCGCTT TCCATTCTGG CTTTAATGAA 2220 2280 GATCCATTCG TTTGTGAATA TCAAGGCCAA TCGTCTGACC TGCCTCAACC TCCTGTCAAT GCTGGCGGCG GCTCTGGTGG TGGTTCTGGT GGCGGCTCTG AGGGTGGTGG CTCTGAGGGT 2340 GGCGGTTCTG AGGGTGGCGG CTCTGAGGGA GGCGGTTCCG GTGGTGGCTC TGGTTCCGGT GATTTTGATT ATGAAAAGAT GGCAAACGCT AATAAGGGGG CTATGACCGA AAATGCCGAT GAAAACGCGC TACAGTCTGA CGCTAAAGGC AAACTTGATT CTGTCGCTAC TGATTACGGT GCTGCTATCG ATGGTTTCAT TGGTGACGTT TCCGGCCTTG CTAATGGTAA TGGTGCTACT 2580 GGTGATTTTG CTGGCTCTAA TTCCCAAATG GCTCAAGTCG GTGACGGTGA TAATTCACCT 2640 TTAATGAATA ATTTCCGTCA ATATTTACCT TCCCTCCCTC AATCGGTTGA ATGTCGCCCT 2700 TTTGTCTTTA GCGCTGGTAA ACCATATGAA TTTTCTATTG ATTGTGACAA AATAAACTTA TTCCGTGGTG TCTTTGCGTT TCTTTTATAT GTTGCCACCT TTATGTATGT ATTTTCTACG 2820 TTTGCTAACA TACTGCGTAA TAAGGAGTCT TAATCATGCC AGTTCTTTTG GGTATTCCGT 2880 TATTATTGCG TTTCCTCGGT TTCCTTCTGG TAACTTTGTT CGGCTATCTG CTTACTTTTC TTAAAAAGGG CTTCGGTAAG ATAGCTATTG CTATTTCATT GTTTCTTGCT CTTATTATTG 3000 GGCTTAACTC AATTCTTGTG GGTTATCTCT CTGATATTAG CGCTCAATTA CCCTCTGACT 3060 TTGTTCAGGG TGTTCAGTTA ATTCTCCCGT CTAATGCGCT TCCCTGTTTT TATGTTATTC 3120 TCTCTGTAAA GGCTGCTATT TTCATTTTTG ACGTTAAACA AAAAATCGTT TCTTATTTGG 3180 ATTGGGATAA ATAATATGGC TGTTTATTTT GTAACTGGCA AATTAGGCTC TGGAAAGACG CTCGTTAGCG TTGGTAAGAT TCAGGATAAA ATTGTAGCTG GGTGCAAAAT AGCAACTAAT CTTGATTTAA GGCTTCAAAA CCTCCCGCAA GTCGGGAGGT TCGCTAAAAC GCCTCGCGTT CTTAGAATAC CGGATAAGCC TTCTATATCT GATTTGCTTG CTATTGGGCG CGGTAATGAT TCCTACGATG AAAATAAAAA CGGCTTGCTT GTTCTCGATG AGTGCGGTAC TTGGTTTAAT 3480 ACCCGTTCTT GGAATGATAA GGAAAGACAG CCGATTATTG ATTGGTTTCT ACATGCTCGT 3540 AAATTAGGAT GGAATGATAA GGAAAGACAG CCGATTATTG ATTGGTTTCT ACATGCTCGT

AAATTAGGAT GGGATATTAT TTTTCTTGTT CAGGACTTAT CTATTGTTGA TAAACAGGCG
CGTTCTGCAT TAGCTGAACA TGTTGTTTAT TGTCGTCGTC TGGACAGAAT TACTTTACCT
TTTGTCGGTA CTTTATATTC TCTTATTACT GGCTCGAAAA TGCCTCTGCC TAAATTACAT
GTTGGCGTTG TTAAATATGG CGATTCTCAA TTAAGCCCTA CTGTTGAGCG TTGGCTTTAT 3720 ACTGGTAAGA ATTTGTATAA CGCATATGAT ACTAAACAGG CTTTTTCTAG TAATTATGAT 3840 TCCGGTGTTT ATTCTTATTT AACGCCTTAT TTATCACACG GTCGGTATTT CAAACCATTA 3900 AATTTAGGTC AGAAGATGAA GCTTACTAAA ATATATTTGA AAAAGIIII ACCCITATITTA ACATATAGTT ATATAACCCA ACCTAAGCCG 4020

TGTCTTGCGA TTGGATTTGC ATCAGCATT ACATATAGTT ATATAACCCA ACCTAAGCCG 4080 4140 CAGCGTCTTA ATCTAAGCTA TCGCTATGTT TTCAAGGATT CTAAGGGAAA ATTAATTAAT AGCGACGATT TACAGAAGCA AGGTTATTCA CTCACATATA TTGATTTATG TACTGTTTCC 4200 ATTAAAAAG GTAATTCAAA TGAAATTGTT AAATGTAATT AATTTTGTTT TCTTGATGTT 4260 TGTTTCATCA TCTTCTTTG CTCAGGTAAT TGAAATGAAT AATTCGCCTC TGCGCGATTT 4320 TGTAACTTGG TATTCAAAGC AATCAGGCGA ATCCGTTATT GTTTCTCCCG ATGTAAAAGG 4380 TACTGTTACT GTATATTCAT CTGACGTTAA ACCTGAAAAT CTACGCAATT TCTTTATTTC 4440 TGTTTTACGT GCTAATAATT TTGATATGGT TGGTTCAATT CCTTCCATAA TTCAGAAGTA TAATCCAAAC AATCAGGATT ATATTGATGA ATTGCCATCA TCTGATAATC AGGAATATGA 4560 TGATAATTCC GCTCCTTCTG GTGGTTTCTT TGTTCCGCAA AATGATAATG TTACTCAAAC 4620 TTTTAAAATT AATAACGTTC GGGCAAAGGA TTTAATACGA GTTGTCGAAT TGTTTGTAAA GTCTAATACT TCTAAATCCT CAAATGTATT ATCTATTGAC GGCTCTAATC TATTAGTTGT 4740 TAGTGCACCT AAAGATATTT TAGATAACCT TCCTCAATTC CTTTCTACTG TTGATTTGCC 4800 AACTGACCAG ATATTGATTG AGGGTTTGAT ATTTGAGGTT CAGCAAGGTG ATGCTTTAGA 4860 TTTTTCATTT GCTGCTGGCT CTCAGCGTGG CACTGTTGCA GGCGGTGTTA ATACTGACCG 4920 CCTCACCTCT GTTTTATCTT CTGCTGGTGG TTCGTTCGGT ATTTTTAATG GCGATGTTTT 4980 AGGGCTATCA GTTCGCGCAT TAAAGACTAA TAGCCATTCA AAAATATTGT CTGTGCCACG 5040 TATTCTTACG CTTTCAGGTC AGAAGGGTTC TATCTCTGTT GGCCAGAATG TCCCTTTTAT 5100 TACTGGTCGT GTGACTGGTG AATCTGCCAA TGTAAATAAT CCATTTCAGA CGATTGAGCG 5160

- 8 -

TCAGAATGTA GCACCAGG CCATACTT ACAGGCTTTT TCCTGTTGCA ATGGCTGGG GTAATATTGT 5220 TACTAATCAA AGAAGTATTG CTACAACGGT TAATTTGCT GATGGACAGA GTGATGTTAT 5280 TACTAATCAA AGAAGTATTG CTACAACGGT TAATTTGCT GATGGACAGA CTCTTTTACT 5340 CGGTGGCCTC ACTGATTATA AAAACACTTC TCAAGATTCT GGCGTACCGT TCCTGTCTAA ATCCCTTTA ATCGGCCCCC TGTTAGCTC CGCCCTCTAT TCCAACGAGG AAAGCAGGT 5460 ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTGTAG CGCCCCTAGG CCCCCTCTT TCCGCTTTCTT CCCTTCCTTC CCCGCCCTT TCCCGGCGCT TCCCCGCTCAA GCCTCTAAATC TCGCTTTCTT CCCTTCTTCT CCCCCCCACT CGCCGCGTTT TCCCCGCTCAA GCTCTAAATC CGGTGGAGGT TAGGGCCAA AGGCACAC CGCCCTAGCC CAAAAAACTTG 5540 ATTTGGGTGA TGGTTCACGT ACGGAGCT CGCCCTCTAA GACGGCAACA GCCTCAAACC CGTGTGGAGT CACCTTCTTT AAATGGGAC TCTTGTTTCCA ACTGGAACA ACACTCAACC CGTGTGGAGT CACCTTCTTT AAATGGGAC TCTTTGTTCCA ACTGGAACA ACACTCAACC CGTGCGAGT CACCTTCTTT AAATGGGAC TCTTTGTTCCA ACTGGAACA ACACTCAACC CCAAGCGGT AAGGCAAACCAG CGTCACCCC AAAAAAACTG 5780 CCAAGCGGATT CCCCTCTGT GATAAGGGAC TCTTTGTTCCA ACTGGAACA ACACTCAACC CCAAGCGGT AAGGCAAACCAG CGTCTTCCCCG CGCTTGCAAC TCTCTCAGG 5940 CCAAGCAGGTT TCCCGACTG AAAGCGGCCA TGCTTGCAAC TCTCTCAGG 5940 CCAACCACATT ACGCAACCC CCTCTCCCC CGCTTTGCCA CGCCCTCTT TACACT TAATGCTTCC GGCTCGTATA TTACACTTCAGG 6120 CCACCACAGGT TCCCCACGC GCTTCACCCT GCTCCGTCG GTGAAAACAA AAACCCCCC 6000 GCGCCCAAT ACCCACGCG CTTACCCT TAACCT TATGCTTCC GGCTCGTATA TTACAACCTC 6120 CTGACCTGGA AAACCCTGC GTTACCCAG CTTTACCTT TATGCTTCC GGCTCGTATT TTGCAGTTAGC 6120 CTGACTCGGA AAACCCTGC GTTACCCAG CTTTTACCT TTGTCATC TTGTCTTCC GGCTCGTAT TTGCAGGCAC 6120 CTGACCTGGA AAACCCTGC GTTACCAT TATGCTTCC GGCTCGTAT TTGCAGGCAC 6120 CGACACTCTA GGCACCCAG CTTTACCAT TATGCTTCC GGCTCGTAT TTGCAGGCAC 6120 CGCACACTCT GGCACCCAC CTTACCCTG GCCCTCCC AAGACCAC CTGGGGCAC 6120 CAACCACCTCTA GCCACGCGC CTTACCCAG CTTTCCCCGCTG GCCCTCTC CCCCAGGGCAC 6120 CAACCACCTCTA ACCCAGCGC CTTCCCCCGCTG TCCTCACACC CTCTCCCAGCGC CTCCCCACG GCTCCTC CAACACC AAGCGCACC CAACCC AAACCCACC CTCCCCAACC CTCCCCAACC CACCACCC CTCCCCAACC CTC							
TACTAATCAA AGAAGTATTG CTACAACGGT TAATTTGCGT GATGGACAGA CTCTTTACT CGGTGGCCTC ACTGATTATA AAAACACTTC TCAAGATTCT GGGTACCGT TCCTGTCTAA 5400 AATCCCTTATA ATCGGCCCC TGTTTAGCTC CGGCTCTGAT TCCACAGAGA AAACACACTT 5400 ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTTAGC CGCCCTAGCG CCCGCTCCTT 5580 CTGTGGGTGT TACGCCCACC GTGACCGCTA CACTTGCCAG CGCCCTAAGC CCCGCTCCTT 5580 CTGGGTGTCTT CCCCTTCCTTT CCCCCCACCT TGCCCAGCT TCCCCCGACA CCCTCAAACCAACTTG CGTGGGGGTC TTTAGGGTC CGATTTAGTC CGCTCCTTA TGCCACGT TCCCCCTAAACCAACTTG CGTGGGGACC CAAAAAACTTG 5700 ATTTGGGTGA TGGTTCACCT AGTGGGCCACC TCCCCCCCAAAAAAACTTG 5700 ATTTGGGTG TATCTTTT AAACTGGAC CTTTGTTCC AACTGGAACA AAAAACTTG 5700 ATTTGGGTG TATCTTTT AAACTGGAC CTTTGTTCC GATTTGGAA CCACCATCAAC 5820 CTATCTCGGG CTATTCTTT TAAACTGGAC CTTTGTTCC GATTTGGAA CCACCATCAAC 5820 CCAGGCGGTG AAGGGAAC ACCTTTCCCCG CGTTGACCC TGTGAAAAGAA AAACCACCCT 6000 CGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCTTGCC GATTTCATAA TGCAGCTGC 6000 CGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCTTGCCC GATTCATTAA TGCAGCTGC 6000 CGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCTTGCC GATTCATTAA TGCAGCTGC 6000 CGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCTTGCC GATTCATTAA TGCAGCTGC 6000 CGCGCCCAAT ACGCAACCG CCTTTCACCT TAACCTT TATGCTTCC GGCCGTCGTT TTTCAACGTC 6000 CCACCTCATT GCACCTGC AAACCGCCT CATTGCACAC CGCCTTCGTC TTTCACACT TTACACTTAA TGCAGCTGC 6100 CCACCTCATT GCACCTGCC TACCACTGC CTTTCACCT TATGCTCTC GGCCGTCGTT TTTCAACGTC 6240 CTACCTCATT GCACTCGCC TTCACCCT ACTTGCACT GCCGTCGTT TTTCAAACGTC 6240 CTACCTCCTC GAGTCGCC TCTACCCT ACTTGCACT CTTTACACT TAACGTTAC CCTGTGGCAA AAGCCCAGGT 6360 CCACCTCCTC GAGTCGCC TCCCCCGCC CTCCCCC ACCACCTC CTCCGGGGCAC CCCACACTC CTCCGGGGCAC CCCACACTC CTCCGGGCCC TCCACACCC CTCCCCCAC CCCCCCCC CCCACACACCC CTCCACACCC CTCCCACACCC CTCCACACCC CTCCACACCC CTCCACACCC	TCAAAATGTA	GGTATTTCCA	TGAGCGTTTT	TCCTGTTGCA	ATGGCTGGCG	GTAATATTGT	5220
ARTOCCTTTA ATCAGCCTCC TCTTTAGCTC CCGCTCTGAT TCCAACGAGG AAAGCACGTT 5460 AATCCCTTTA ATCAGGCCTCC TCTATTAGCTC CCGCTCTGAT TCCAACGAGG AAAGCACGTT 5460 ATACGTGCTC GTCAAAGCAA CCATAGTAGG GCCCCTTAG CGCCGCATTA AGCGGCGCG 5520 GTGTGGTGGT TACGCCACG GTGACCGCT TCGCCAGCT TCCCCGTCAG CCCCTCTT 5580 TCGCTTTCTT CCCTTCTTT CCGCCACGT TCGCCAGCGT TCCCCGTCAG GCCCTTAAA GCGGGCCCC TTAGGGGCCC CAAGACCC AAAAAACTTG 5700 ATTTGGGTGA TGGTTCACGT AGTGGCCAC CCTCACACAC CCCGACCC AAAAAAAAAA	TCTGGATATT	ACCAGCAAGG	CCGATAGTTT	GAGTTCTTCT	ACTCAGGCAA	GTGATGTTAT	5280
AATCCCTTTA ATCGGCCTC TGTTTAGCTC CGCTCTGAT TCCAACGAGG AAAGCACGTT ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTGTAG CGGCGCATTA AGCGCGGCGG GTGTGGTGGTGTGTGTGCGAGC GTGACCGCTA CACTTGCCAG CGCCCTAGGG CCCCGTCCTT 5880 TCGCTTTCTT CCCTTCCTTT CTCGCCACGT TCGCCGGCT TCCCCGTCAAGC CCCCGTCCTT 5880 ATTTGGGTGA TGGTTCACGT AGTGGGCCAT TCGCCGGCTT TCCCCGTCAA GCTCTAAATC 5640 GGGGGCTCC TTTAGGGTTC CGATTTAGTG CTTTACGGCA CCTCGACCC AAAAAACTTG 5700 CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA ACATGGAACA ACACTCAACC 6820 CTATCTCGGG CTATTCTTTT GATTATAAG GGATTTTCCA ACATGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTTT GATTATAAG GGATTTTCCC AACTGGAACA CCACCATCAA 5880 CCAGGCGGTG AAGGGCAATC AGCGTGTCCC CGCCTGGTG GTGAAAACAA ACACTCAACC 69CGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTGGCCG TTGCTGCAAC CTCTCTAGGG 5940 CCAGGCGGTG AAGGGCAATC AGCTGTCCCCG CGCTTGGCC TTGCTGCAAC CTCTCTAGGG 5940 CCAGGCGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCC ATTCATTAA TGCAGCTGGC 6600 GGCGCCAAT ACGCAAACCG CCTCTCCCCG CGCTTGGCC GATTCATTAA TGCAGCTGGC 6600 AGGACAGGTT TCCCGACTGG AAACCGGCC ATTGGCCC ATTCATTAA TGCAGCTGGC 6600 TCACTCATTA GGCACCCCAG GCTTTACACTT TTATGCTTCC GGCCTGATGT TTGTGTGGAA AGCACTGAT AGCCACCCAG GCTTTACACCT TTATGCTTC GGCGTCGTT TTACACCTC 6240 GTGACTGGA AAACCTTGC GTTACCCAAG CTTTGTACAT GGCGTATGT TTGTGTGGAA AGCACTGAT CCCACTGC GTTACCCAAG CTTTGTACAT GAGAAATA AAGTGAAACA AGCACTGAT CCCACTGC GTTACCCAAG CTTTTACACTT GGCGTCGTT TTACACGTC 6340 AGCACTGAT GCACGCGC TCCACAG CTTTACCCTT ACTTGAAATA AAGTGAAACA AGCCACTGAT GCACGCGC GTCCCCCG CCCCTCCC AAGAGCACC TCCGGGAACCAAGC AAGCCCAGGT GCCAAGACCAAGC AAGCCCAGGT GCCACAGCT TCCCCGGCA ACCCAAGCAC AAGCCCAAGC AAGCCCAAGC AAGCCCAAGC AAGCCCAAGC AAGCCCAAGC AAGCCCAAGC AAGCCACAC AAGCCACAC AAGCCACC AAGCCACAC AAGCCACC AAGCCACAC AAGCCACC AAGCCACAC AAGCCACC AAGCACCAACC AAGCCACC AAGCACCAC AAGCCACC AAGCACCAC AAGCCACC AAGAACCAC AAGCCACC AAGCACCAC AACCACCAC AACCACCACC ACCACACC AACCACC	TACTAATCAA	AGAAGTATTG	CTACAACGGT	TAATTTGCGT	GATGGACAGA	CTCTTTTACT	5340
ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTGTAG CGGCGCATTA AGCGCGCGG 5520 GTGTGGTGGT TACGCGCAGC GTGACCGCTA CACTTGCCAG CGCCCTAGCG CCCGTCCTT 5580 CGCTTTCTT CCCTTCCTTT CTCGCCACGT TCGCCGGCTT TCCCCGTCAA GCTCTAAATC 5640 GGGGGCTCC TTTAGGGTT CGATTTAGTG CTTTACGCCA CCTGACCC AAAAAACTTG 5700 ATTTGGGTGA TGGTTCAGGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCTTTCA 5760 CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTTT GATTTATAAG GGATTTTCC GATTTCGGAA CACACCAACA 5880 ACAGGATTTT CGCCTGCTGG GGCAAACCAG CGTCTCGCC GTGTAGAACA ACACTCAACC 5820 CCAGGCGGTG AAGGCAATC AGCTGTTCC CGCTCTGCTG GTGAAAAAAAAACACACCCT 6000 ACGACAGAT AGCGAAACCG CCTCTCCCCC GGCTTGGCC GATTCATTAA TGCAGCTGGC 6660 ACGACAGAT AGCGAAACCG CCTCTCCCCC GGCTTGGCC GATTCATTAA TGCAGCTGGC 6660 ACGACAGTT TCCCGACTG AAAGCGGCC GCGTTGGCC GATTCATTAA TGCAGCTGGC 6660 ACGACAGGTT TCCCGACTG AAAGCGGCCA GCTTTACCTTC GGCCGCTATTAA TGCAGCTGC GATTGCAACC CTTCCCCCG GCGTTGGCC GATTCATTAA TGCAGCTGGC GATTGCAACC CTTCACCAG GCTTTACACT TTATCATACACT TTACAACT TTACAACT TTACAACCACGCCC GACTGGACA AAGCCACACCAC GTTACACAC CTTTGCACT GGCCGCTCTT TTACAACGT CCAGCGCCC AAACCACACC CCAGCACCAC GTTACACAC CTTTGCACT GGCCGCTTTTACACT CACGCCCC ACCCCCCAC GACCACCAC CTTGCCACAC CTTGTCCCAGC GACCACCAC CTTGCGCAA AAGCCACACC CACCCCAC GACCACCAC CTTCACACC CACCACCAC CTTGCGCAA AAGCCACCAC CTTCACACCAC CTTCACACCAC CTTCACACCAC CTCCTCC CAACACCAC CTCCTCCC CAACACCAC CTCCGGCAC CACCCACACC TCCGGACACC CTCCAGCACCC CACCCACACC CTCCAGCACCC CACCCACACC CTCCAGCACCC CACCCCACCC	CGGTGGCCTC	ACTGATTATA	AAAACACTTC	TCAAGATTCT	GGCGTACCGT	TCCTGTCTAA	5400
GTGTGGTGGT TACGCGCAGC GTGACCGCTA CACTTGCCAG CGCCCTAGCG CCCGCTCTT TCGCTTCTTT CCCCTTCCTTT CTCGCCACGT TCGCCGGCTT TCCCCGTCAA GCTCTAATATC GGGGGCTCCC TTTAGGGTTC CGATTTAGTG CTTTACGGCA CCTCCACCCC AAAAAACTTG ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGCACCC AAAAAACTTG ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGCACCCC AAAAAACTTG CGTTGGAGTC CACGTTCTTT AATAGTGGAC CTTTTCTCCA AACTGGAACA ACACTCAACC GGTTGGAGTC CACGTTCTTT AATAGTGGAC CTTTGTTCCA AACTGGAACA ACACTCAAAC CACACTATACTTTT CGCTATTCTTT GATTTATAAG GGATTTTGCC GATTTCGGAA CACCTCAAA ACAGGATTT CGCCTGGG GGCAAACCAG CGTGGACCGC TTGCTGCAAC CACCATCAA ACAGGAGTTT CGCCTGGG GGCAAACCAG CGTGGACCGC TTGCTGCAAC CTCTCACAGG GCGCCCAAT ACGCAAACCA CCTCTCCCCC CGCGTTGGCC GATTCATTAA TGCAGCTGGC GGCGCCCAAT ACGCAAACCA CCTCTCCCCC CGCGTTGGCC GATTCATTAA TGCAGCTGGC GCGCCCAAT ACCGAAACCA GCTTTACCAT TTATGCTTCC GGCTGTATAA TGCAGCTGGC CACTCATTA GGCACCCCAG GCTTTACCAT TTATGCTTCC GGCGTCGTT TTACAACCTGC CACCTCATTA GGCACCCCAG GCTTTACCAAT TTATGCTTCC GGCGTCGTT TTACAACACTC 6240 TCGTGACTGGA AAACCCTGCC GTTACCCAAG CTTTGGACAT GGCGTCGTT TTACAAACAT AAGCACTATT GCACTGGCAC TCTTACCCAT ACTTGGCACT GGCGTCGTT TTACAAACAT AAGCACTATT GCACTGGCAC TCTTACCCAT ACTTGTACCCAAG CTTTGTACAT GGAGAAATAA AAGTGAAACA AAGCACTATT GCACTGGCAC TCTTACCCATC ACTTTGCACT GGCGTCGTT TACAAACAC AAGCGCCCCTG GGCTGCCTGG TCACCAACAC CTTCTACACT GGCGAAAATAA AAGTGAAACA AAGCACTATT GCACTGGCAC TCTTACCCATC ACCTTCCCAC AGGACACAC CGGTGGACGGT TCCTGGGGAC GCGCCCTG GGCTGCCTGG TCAAGACTAA TCCCCCGAC CGGTGACGGT TCCTGGGGAC GCGCCCTG GGCTGCCTGG TCAAGACTAA TCCCCCGAC CGGTGACGGT TCCTGGGGAC GCGCCCTG GGCTGCCTGG TCAAGACTAA TCCCCCGAC CGGTGACGGT TCCTGGGGAC GCACACACAC CGGCGACACC TCCAACACC TCCAACACT TCCGGCACCA GACCTACATC GCACACTGC ATCCAAGCC CACCAACACC TCCAACACT TCCGGCACCA GACCTACACT TCCTCCCTCA AGGCTGCT TAATGTTTAC ACGCAACACC TCCAACACT TCCAACAT ACTTCAACATAC GACTACACT TCCGGCACCA AGGCGGCCACCACCT TCCAACACT TCCACACCT TCCA	AATCCCTTTA	ATCGGCCTCC	TGTTTAGCTC	CCGCTCTGAT	TCCAACGAGG	AAAGCACGTT	5460
TCGCTTTCTT CCCTTCTT CTCGCCACGT TCGCCGGCTT TCCCCGTCAA GCTCTAAATC GGGGGCTCCC TTTAGGGTTC CGATTTAGTG CTTTAGGGCA CCTCGACCCC AAAAAACTTG 5700 ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCCTTTGA AATAGTGGAC CGCCTGATA GACGGTTTTT CGCCTGTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCTGGG CTATTCTTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCTGGG CTATTCTTTT GATTATAAG GGATTTTGCC GATTTGGGAA CCACCATCAA 5880 ACAGGGGTT CGCCTGCTG GGCAAACACA CGGTGTTCCC GTTGAACAA AACACCCCT 6000 GCGCGCCAAT AGGCAATC AGCTGTTCCC GTTGGCACC TTGCTCAAC TCTCTCAGGG CAGGGGGGTG AAGGGCAACA CGCTTCCCCG CGCTTGCCC GTTGAAAAGAA AAACCACCCT 6000 GCGCCCAAT ACGCAACCG CCTTCCCCG CGCGTTGCC GTTGAAAAGAA AAACCACCCT 6000 ACGACAGGTT TCCCGACTGG AAAGGGGCAA GTGAGCGCAA CGCAATTAAT GTCAGCTGGC 6000 ACGACAGGTT TCCCCACCAG CCTTACACT TTATGCTTCC GGCCTCGTTT TTTGTGTGGAA 6120 TCACTCATTA GGCACCCCAG GCTTACACT TTATGCTTCC GGCCTCGTTT TTTACAACGTC CACCTCATTA GACCAGGGC ATACCAATTT CACACGGGTC ACTTGGCACT GGCCGTCGTT TTACAACGTC CACCAGCGGC AAACCCCAG CTTACCCAG CTTTGCACT GGCCGTCGTT TTACAACGTC CACCAGCGGC CTTACCCCAG CTTTGCACT GGCAGAAAAAAAAAA	ATACGTGCTC	GTCAAAGCAA	CCATAGTACG	CGCCCTGTAG	CGGCGCATTA	AGCGCGGCGG	5520
GGGGGCTCCC TTTAGGGTTC CGATTTAGTG CTTTACGGCA CCTCGACCCC AAAAAACTTG 5760 ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCCTTTGA TTTTGGAGTC CACGTTCTTT AATAGTGGCC TCTTGTTCCA AACTGGAACA ACCACCACC CTATCTCGGG CTATTCTTT GATTTATAG GGATTTTGCC GATTTCGGAA CCACCATCAA CCAGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTGCTG GTGAAAAGAA ACACCCCT 6000 GGGCCCAAT ACGCAACCC CCTCCCCC GCGTTGCC GTGAAAAGAA AAACCACCCT 6000 ACGACAGGTT TCCCGACTGG AAAGCGGCA GTGACCGC GATTCATTAT GCAGCTGGC ACGACAGTT TCCCGACTGG AAAACCGC CCTCCCCC GCGTTGGCC GATTCATTAA TGCAGCTGGC ACGACAGCTT TCCCCACTGG AAAACCGCA CTTGCTCCC GGCTTGCCC GATTCATTAA TGCAGCTGGC ACGACAGCTT TCCCCACTGG AAAACCGGCA CTTGCTCCC GGCTTGCCC GATTCATTAA TGCAGCTGC 6120 TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTT TTCACACGTC 6240 GTGAACAGGA AAACCCTGGC GTTACCCAAG CTTTGCACAT GGCAAAAATA AACTGAGAACA AGCACTATT GCACTGGCA CTCTTACACT TATGCTTCC GGCTCGTT TTACACGTC 6240 GTGAACGGA AAACCCTGGC GTTACCCAAG CTTTGTACCT GAGAAAATA AACTGAAAACA AAGCACTATT GCACTGGCAC TCTTACCCTTACACT TCCCCCTGC CAGGAAAATA AAGCCCAGGT 6360 AAGCACTATT GCACTGGCAC TCTTACCCTTC AAGACCAC CTGGGGCAC CTGGGGGCAC CAGCACACCC TCCCGGCG CCTGCCCC CTGCGAGACCT CTGGGGGCAC CACCACCACCC TCCCGGCGC CTGCAGACCC CTGCGGGCAC CTGCAGACCC TCCCGGCGC CTGCAGACCC TCCCGGCGC CTGCAGACCC TCCCGGCGC CTCCAGGACCT CTGGGGGCAC CTCCAGGACCT CTGGGGCAC CTCCAGGACCT CTGGGGCAC CTCCAGGACCT CTGGGGCAC CTCCAGGACCT CTGGGGCAC CTCCAGGACCT CTGGGGCAC CTCCAGGACCT CTGCGGCACACAC CACCAACACC AAGGTGGACA GAAAAACAAATCT CACCAACGC CTCCCAGCACAC CACCACACACC CACCAACACC AAGAGCACAC AGAAAACAAAC	GTGTGGTGGT	TACGCGCAGC	GTGACCGCTA	CACTTGCCAG	CGCCCTAGCG	CCCGCTCCTT	5580
ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCCTTTGA 5760 CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTT GATTATAAG GGATTTTCCC GATTTCGGAA CCACCATCAA 5880 ACAGGATTTT CGCCTCCTGG GGCAAACCAG CGTGGACCGC TTGCTCCAACC TCTCTCAGGG 5940 CCAGGCCGAT AGGCAAACCC CCTCTCCCCG GGCTTGCCC GATTCATTAA TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAACCGGCA GCTTTACACT TTATGCTTCC GGCTTGATGC GAATCAAT TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAACCGGCA GTGACCGCA GCCAATTAAT TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAACCAGCT ATTTATGCTTCC GGCTGTATG TTGTTGTGGAA 6180 TCGTCACTCATTA GGCACCCCAG GCTTTACACAT TTATGCTTCC GGCCTGTATG TTGTTGTGGAA 6180 TCGTGACTAGGA AAACCACTGGC GTTACCACAT TATTGCTTCC GGCCTGTATG TTTACAACGTC 6240 AGCACTGGA AAACCACTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GACCTGGCAC TCTTACCACT TTATGCTTCC CCTGTGGCAA AAGCCCAGGT 6360 CCAGCTGCTC GACCAGCGG CGTCACCAC TTCCCCCAGC CCTGTCACAGT CTGGGGCAC GCCACCAC TCCAGCACC TCCACAGCGC GGCTGCACC TCCAGCACC TCCACCACC TCCAGCACC TCCAGCACC TCCAGCACC TCCACCACC TCCACCACC TCCACCACC TCCACCACC TCCACCACCACC TCCACCACCACCACC TCCACCACCACC TCCACCACCACCACCACCACC TCCACCACCACCACCACCACCACCACCACCACCACCACCA	TCGCTTTCTT	CCCTTCCTTT	CTCGCCACGT	TCGCCGGCTT	TCCCCGTCAA	GCTCTAAATC	5640
CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTTT GATTTATAAG GGATTTTGCC GATTTCGGAA CCACCATCAA 5880 ACAGGATTTT CGCCTGGTG GGCAAACCAG CGTGGACCGC TTGCTGCAAC TCTCTCAGGG 5940 CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTGTGGCC GTGAAAAGAA AAACCACCCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GTGAAAAGAA AAACCACCCT 6000 ACGACAGGTT TCCCGACTGG AAGCCGGCA GTGACCGCAA CGCAATTAAT GTGAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAAGCGGCCA GTGACCGCAA CGCAATTAAT GTGAGTTAGC 6120 TCACTCATTA GCACCCCAG GCTTTACACT TATGCTTCC GGCTCGTATG TTGTGTGGAA 6180 TTGTGAGACGG ATAACAATTT CACACGCGCT ACTTGCACT GGCCGCTTGT TTTACAACGTC 6240 GTGACTGGGA AAACCCTGC GTTACACT TATGCTTCC GGCCGTTGT TTACAACGTC 6240 AGGCACTGTT GCACTGGCAC TCTTACCGTT ACTGTTACAC GGCCGTTGT TTACAACGTC 6240 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTACAC TGGGAAAAAAA AAGTGAAACA 6300 AAGCACTATT GCACTGGCCA TCTTACCGTT ACTGTTACAC TGGGACACC AGGCGGCCC GGCTGGTT TTCCAAGACCA AGCCCAGGT 6360 CCAGCTGCTC GAGTCGGTCT TCCCCCTGCC ACCTCCCC AAGAGCACC AGGGGGCAC GCCAAACCC AGGCGCCCC GGGTGCACGC TCCTGCCAACCC TCCCCGAAC CGGTGACGGT TCCTCGGGAC 6480 TCAGCGCCCC GGACCGTGGT TCCCCCTGCC ACCCTCCC AAGAGCCCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC TCCAGCAGCT TCCTCCAACCC GCCCAAACCC AGGACACCA AGACACCA AGACACCA AGACACCA AGGCACCCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGACA AGAAAGCAGA GCCCAAATCT 6600 TGTACTAGTG GATCCTACCC GTACGACGT CCGGACTACG CTTCTTAGGC TGAAGCCGAT 6720 GACCCTGCTA AGGCTGATT CAATAGTTG CAACACCC AGGACACC AGGAAACCA AGAAGCAG CCCAAATCT 6600 TTTACTAGTG GATCCTACCC GACACACC AAGGCGATCG CTCTCTAAAAAT ATTCAAAAAG 6840 AGTTGCGCAC CCTGAATGG GAATAGCC AGAGAGCGGT TCCCCAACC AGGAATCCA CACCAACCC AACACC AACACC AAGAGCGGTC CCTCCAAACC AGGAATCCACACC AACACC AACA	GGGGGCTCCC	TTTAGGGTTC	CGATTTAGTG	CTTTACGGCA	CCTCGACCCC	AAAAAACTTG	5700
CTATCTCGGG CTATCTTTT GATTTATAAG GGATTTGCC GATTTCGGAA CCACCATCAA S880 ACAGGATTTT CGCCTGGTG GGCAAACCAG CGTGGACCGC TTCCTGCAAC TCTCTCAGGG 5940 CCAGGCGGTG AAGGCCAATCAG CGTGTCGCTG GTGAAAGAA AAACCACCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTGGCC GATTCATTAA TGCAGCTGGC 6060 ACGACACGT TCCCGACGG AAAGCCGCAC GCCTTTCCCG GATTCATTAA TGCAGCTGGC 6060 ACGACACACT TCCCGACGG AAAGCCGCAA CGCAATTAAT TCCAGCTGGC GCTTTCATCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTTT TTACAACGT 6240 AAACCACTT CACACCGCTC ACTTGGACAC GGCCTCGTT TTACAACGT 6240 AAGCACACGAAACAA AAACCACTGC GTTACCACA CTTTGTACAT GGCACTCGAA AAACCACTGC GTTACCACA CTTTGTACAT GGCAGCACAAAAAA AAGCCAAGGA AAACCACTGC GTTACCACAG CTTTGTACAT GAGAAAAA AAGCCAAGGT 6360 AAACAATTT CACACCGGTC ACCTCTCC AAGAGCACA AAGCCCAGGT 6360 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTACCA CCTGTGGCAA AAGCCCAGGT 6360 AAGCACACT TCCCCGTGC ACCCTCCC AAGAGCACAC CTGTGGGAC CTCTGTGGAAC 6480 TCAGGGGCCCT GGCTGCTTGG TCAAAGACTAA TTCCCCGAAC CGGTGACGGT TCCTGAGACC TCCAGCAGC TCCCAGCAGC TCCCAGCAGC TCCCAACACC TCCCGACAC TCCCAGCAGC TCCAACACC CTCAGCAGC TCCAACACC AAGACCACA AGAAACAAACC AAGACACA AAGACACA AAGCCCAAACAC AAGACCACA AGAAACACA GCCCAAACAC CAACACC AAGACCAC AAGACACA AGAAACACA GCCCAAACAC AAGACACAC CACCTACATC GCACCCTCTAAGC TCAACACAC CAACACAC AAGACACAC AAGACACAC AAGACACAC AAGACACAC AAGACACAC AAGACACAC AAGACACAC CACCAACACC AAGACACAC CACCAACACC AAGACACAC CACCAACACAC CACCACACACA	ATTTGGGTGA	TGGTTCACGT	AGTGGGCCAT	CGCCCTGATA	GACGGTTTTT	CGCCCTTTGA	5760
ACAGGATTTT CGCCTGCTGG GGCAAACCAC CGTGGACCGC TTGCTCAAC TCTCTCAGGG 5940 CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTGCTG GTGAAAAGAA AAACCACCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT TGCAGCTGGC 6120 TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGTGGAA 6180 TTGTGGACGGA AAACCAATTT CACACGCGTC ACTTGGCACT GGCCGTCTT TTACAACGTC 6240 GTGACTGGAA AAACCACTGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA GTGACTGGAA AAACCACTGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTTACC CCTGTGGCAA AAGTGAAACA 6360 CCAGCTGCTC GAGTGGGTCT TCCCCCTGGC ACCTCTCC AAGAGCACCT CTGGGGGCAC 6420 AGCGGCCCT GGCTGCTGG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAAC 6480 TCAGCGCCCC TGACCAGGCG CGTGCACACC TCCAGCAGCT TCGGGCACCC TCAGGACC CTCAGGACT CTCAGGACT CTCAGGACT CTCAGGACT CTCAGGACT GGCCACCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC CAGCACACC TCCAGCAGCT TCGGCACCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACAC CAGCACACC CTCAGAGACA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTAC CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAACAC CACCAATCC CTCCCAAC GCCCAACTC ATTGCCTAC GGCACCACA GAGCGGTGC CACCGATCC CCCAAATCT 6660 TTTACCAGCA AGGCTTCTTA AGCAATAGC AAGAGCCCC CACCGATCC CCCCAAACTC 6780 AGTTGCGCAC CGGTAAGGC GATTGTTA AGCAATAGC AGGCGATAC CTCCCAACA GGCCAAATC TACACAACA AGCCTACCA CACCAACAC AGCAGCACC CACCGATCC CCCTCCCAAC 6900 AGTTGCGCAG CCTGAATGC GATTTACA AAAAATTTA CAGCCAACC AACCCAACCA CACCAACCA CACCAACCA	CGTTGGAGTC	CACGTTCTTT	AATAGTGGAC	TCTTGTTCCA	AACTGGAACA	ACACTCAACC	5820
CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTCGCTG GTGAAAAGAA AAACCACCCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT GTGAGTTAGC 6120 TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTATT TTTGTGTGGAA 6180 TTGTGAGCGG ATAACAATTT CACACGCGTC ACTTGGCACT GGCCGTCGTT TTACACGTC 6240 GTGACTGGGA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGCCCAGGT GCAGCTGCTC GAGTCGGTCT TCCCCTGGC ACCTTCCTC AAGAGCACCT CTGGGGCAC CCAGCTGTT GCACTGGCAC TCCTCCTC ACCTCCTC AAGAGCACCT CTGGGGCAC CACCTCCTCC AAGAGCACCT CTGGGGGCAC 6420 AGCGCCCTG GGCTGCCTGG TCAACACACAA TTCCCCGGAC CGGTGACGGT GTCGTGGAAC 6480 TCAGGCGCCC TGACCAGCG CGTGCACACC TCCCCGCACC CGGTGACGGT GTCGTGGAAC 6640 TCAGCGCGCC TGACCAGCG CGTGCACACC TCCCGGACC CCTCCTCC ACCCTCCTC GCACCCTCTC GCACCCTGGACC GACCCTACATC 6660 TGCAACGTGA ATCACAAGCC CAGCAACAC AAGCTGGACA AGAAAGCACA GCCCAAATCT 6660 TGCAACGTGA ATCACAAGCC CAGCAACAC AAGCTGGACA AGAAAACACA GCCCAAATCT 6660 TGCAACGTGA ATCACAAGC CAGCAACAC AAGCTGGACA CCTTCTTAGG TGAAGAGCAA GCCCCAAATCT 6660 ACCCTGCTA AGGCTGCAT CAATAGTTTA CAGGCAAGTG CTTCTTAGG TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGG TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGG TGAAGGCGAT 6720 GACCTTGCGAC CCTGAATGG GAATGCG AAGAGCCCC CACCGATCC CCTTCCAAC 6900 AGTTGCGCAG CCTGAATGG GAATGCGA TTCCCTGAT CACCAACAC AAGCGGTGC CCTTCCAAC 6900 AGTTGCGCAG CCTGAATGG GAATGCGAT TCCCGCACC GAACCGTGC CCTTCCAAC 6900 AGTTGCGCAG CCGGATGC GAATTCCCT ACACCAACT AACCCAACT AACCCAACAC AACCGGTGC CCTTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCCCCATCT ACACCAACT AACCTAACT TTTAATGTTG 7140 ATGAAAACTG GCTGAAGAG GGCCAACC GAATTCTTT TGTTCCTAG TTTAATGTTG 7140 AAAAAAATAG CTGATTTAAC AAAAATTAA CAGCAATTTT TTTAATGTTC TTTTTTTCCTTTTTTTTTT	CTATCTCGGG	CTATTCTTTT	GATTTATAAG	GGATTTTGCC	GATTTCGGAA	CCACCATCAA	5880
GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC ACGACAGGTT TCCCGACTGG AAACCGGGCA GTGAGCGCAA CGCAATTAAT GTGAGTTAGC 6120 TTGTGAGCGG ATAACAATTT CACACGCGTC ACTTGCCACCT TTATCACTCTCC GGCTCGTATG TTGTGTGGAA 6180 TTGTGACCGA ATAACAATTT CACACGCGTC ACTTGCACCT GGCCGTCGTT TTACAACGTC 6240 GTGACTGGGA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAAAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGCGCC TCCCCCCACCCCCC GAGTCGCTC GAGTCGGTC TCCCCACCC ACTGTCCCCC GAGTCGCCC GAGTCGCTC TCCCCCCCCCC	ACAGGATTTT	CGCCTGCTGG	GGCAAACCAG	CGTGGACCGC	TTGCTGCAAC	TCTCTCAGGG	5940
ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT GTGAGTTAGC TCACTCATTA GGCACCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGGAA 6180 TTGTGAGCGG ATAACAATTT CACACGCGTC ACTTGGCACT GGCCGTCGTT TTACAACCTC 6240 GTGACTGGGA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTACC CCTGTGGCAA AAGCCCAGGT 6360 CCAGCTGCTC GAGTCGGTC TCCCCCTGGC ACCCTCCTC AAGAGCACCT CTGGGGGCAC 6420 AGCGGCCCT GGCTGCCTGG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAA CGCCAGGT 6540 TCAGGCGCCC TCACACAGGG CGTCCACACC TTCCCGGACC TCCCAGGCT CTCAGGACTC 6540 TCCAGCGCGC TCAACAGCG CACCCACCC TCCCAGACT TGGCACACCC CTCAGGACTC 6600 TGCAACCTGA ATCACAAGCC CACCAACACC AAGGTGGACA AGAAACAAGA GCCCAAATC 6660 TGTACTAGTG GATCCTACCC GTACGACCC AAGGTGGACA AGAAACACAGA GCCCAAATC 6660 TGTACTAGTG GATCCTACCC GTACGACCC AAGGTGGACA AGAAACACGAG GCCCAAATC 6660 TGTACTAGTG GATCCTACCC GTACGACCC AAGGTGGACA AGAAACACGAG GCCCAAATC 6660 TGTACTAGTG GATCCTACCC GTACGACCC AAGGTGGACA AGAAACACGAG GCCCAAATC 6660 TGTACTAGTG GATCCTACCC GTACGACTC CCGGACTAC CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGATT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT 6720 GACCTGCTA AGGCTTCTTA AGCAATAGCG AAGGCGACCC CACCGATCG CCTTCCCAAC 6780 GCTTGGGCAC AGGCTTCTTA AGCAATAGCG AAGACGCCG CACCGATCG CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCCGCACCA GAAGCGGTGC 6900 AGTGCGCGTT TGTTCCCAAG GAATACCA AGGCCGACCC CACCGATCG CCTTCCCAAC 6900 ATCCAGAGTGC GCTGAATGGC GAATCCGA CGGTTGTT TCCGCACCA GAAGCGGTGC 6960 ATCCAGAGTGC GCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCACGCGTT TGTTCCCAAG GGCCCATCT ACACCAACGT AACCTATCC ATTACGTTTA 7020 AAAAAAATGA CTGATTTAAC AAAAATTTAA CGCGGATTCT TGACGCTCT CTTTTTGGT TTATACGTTTA CAAAAATTTA CAATCTTCCT AAAAAATT TAACCGTTTA TAACAGTTTA CTCAAAAATT TAACCGTTTA CTCGATTTAC TAACATTTT TGACGTCTC TTGTTTTGCT TAACCGTTTA TAACAGTTTA CAATCTTCCT TAACAGTTTA CTCAAAAATT TAACCATTAC TAACAGTTT TAACAGTTTA TAACAGTTTT TAACCTTCTC TAACAGTTTA TAACAGTTTC CACCCTTT	CCAGGCGGTG	AAGGGCAATC	AGCTGTTGCC	CGTCTCGCTG	GTGAAAAGAA	AAACCACCCT	6000
TCACTCATTA GGCACCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGTGAA 6180 TTGTGAGCGG ATAACAATTT CACACCGGTC ACTTGGCACT GGCCGTCGTT TTACAACGTC 6240 GTGACTGGCA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTTACC CCTGTGGCAA AAGCCCAAGGT CCAGCTGCTC GAGTCGGTCT TCCCCCTGGC CACCCTCTCC CAAGAGCACCT CTGGGGGAC 6420 ACGGCCCTT GGCCACGGT TCACCCAGGT TCCCCCTGGC CACCCTCTCC CAAGACCACCT CTGGGGGAC 6420 TCAGGCGCCCT GGCCACGGG CGTGCACACC TTCCCCGACC CGGTGACCGT GTCGTGGAAC 6540 TCAGGCGCCC TGACCAGCGG CGTGCACACC TCCCGGAC CGGTGACGCT CTCAGGACTC 6540 TACTCCCTCA GCAGCGGG CGTGCACACC TCCCGGCAC TCCAGCACCT CTCAGGACTC 6540 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGCCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCACA GCCCAAATCT 6660 TGTACTACTGT GATCCTACCC GTACGACCTT CCGGACTACG CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGT CTTCTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGT CTTCTAGGC TGAAGGCGAT 6720 GCCTGGGCTA TGGTAGTAGT TATAGTTTGGT GCTACCAATG GATTAAATT ATTCAAAAAA 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGCAGAGG GAATCTCCT AGGCCAATC GGTCGTCC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGACT GCCCCATCT ACACCAACGT ACCTATCCC ATTACGGTCA 7080 ATCCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCCCACC ATTACATTTT TCAACAGGC TTTACAACAGG GAATTTTAC TCCGCCGTT TCCCACC GAGAATCTC TTTACTAGAT TTTCCACG GAGAATCTCC TTTTTTGGG CTTTTTTATATTTTTC 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT TAACAACAATAT TAACGTTTAC 7260 AATTAAAAAT TTTGCTTATA CAATCTTCCT GTTTTTGGG CTTTTTTTGGT TTTTTTTTCTTC TTTTTTTT	GGCGCCCAAT	ACGCAAACCG	CCTCTCCCCG	CGCGTTGGCC	GATTCATTAA	TGCAGCTGGC	6060
TTGTGAGGG ATAACAATTT CACACGCGTC ACTTGGCACT GGCCGTCGTT TTACAACGTC GTGACTGGGA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTACCT CCTTGTGCAA AAGCCCAGGT 6360 CAGCTGCTC GAGTCGGTCT TCCCCCTGGC ACCCTCCTC AAGAGCACCT CTGGGGCAC 6420 TCAGGGCCCT GGCTGCCTG TCAAGACTAA TTCCCCGACAC CGGTGACGGT GTCGTGGAAC 6480 TCAGGCGCCC TGACCAGGG CGTGCACAC TTCCCGGGTG TCCTACAGGTC CTCAGGACTC CTCAGGACTC TCCAGGACT TCCAGCAGCT TCCAGGAC GACCTACATC 6600 TCAACACGTG ATCACAAGCC CAGCACACC AAGGTGGACA AGAAAGCACA GACCTACATC 6600 TGCAACGTG ATCACAAGCC CAGCACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCA CAACACCA AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TCTACAGGTA AGCCTACACC CAACACCA AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TCTACTGGGCTA AGGCTGCAT CAATAGTTTA CAAGAGTG CTTCTTAGGC TCAAAGGCGAT 6720 GCCTACAGGA AGGCTGCAT AAGGTTGATA AGCAATAGCG AAGAAGCCG CACCGATCGC CTTCCCAAC 6780 AGTTCCCGCGAT TGGTAGTAGT AATAGTTGGT AAGAATAGCG AAGAGCCCC CACCGATCCC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGCC GAATGCCG CACCGATCCC CCTTCCCAAC 6900 AGTTGCCAGA CGCCAATCCT AGGCCAATCC GAAAGCCG CACCGATCGC CCTTCCCAAC 7020 GCCAAAAGCT GCTTCCCAAC GAAACCCA ACACCAACGT AACCCAACGT AACCTACCC ATTACGGTCA 7080 ATCCCCCGTT TGTTCCCACG GAAAACCCA CGGTTGAT ACCATACG TAAAAATTAA CCGCCAATTTT AACCAAAAATAT TAACGGTCA 7040 AAAAAATATA TTTGCTTAAA AAAAATTTAA CGCGCAATTTT AACCAAAAATAT TAACGGTTA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 AAAAAAATAA TTTGCTTAAA AAAAATTTAA CGCGCAATTTT AACAAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATAC AAAAATTTAA CGCGCAATTTT AACAAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATAC AAACGTTTA TTTTTGGGG CTTTTTTTTTT	ACGACAGGTT	TCCCGACTGG	AAAGCGGGCA	GTGAGCGCAA	CGCAATTAAT	GTGAGTTAGC	6120
GTGACTGGGA AAACCCTGGC GTTACCCAAG CTTTGTACAT GGAGAAAATA AAGTGAAACA 6300 AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTACC CCTGTGGCAA AAGCCCAGGT 6360 CCAGCTGCTC GAGTCGGTCT TCCCCCTGC ACCCTCCC AAGAGCACCT CTGGGGGCAC 6420 AGCGGCCCT GGCTGCCTG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAAC 6480 TCAGCGCCCC TGACCAGCGG CGTGCACACC TTCCCGGCTG TCCTACAGTC CTCAGGACTC 6540 TACTCCCTCA GCAGCGGT GACCGTGCCC TCCAGCAGCT TCCTACAGTC CTCAGGACTC 6600 TGCAACGTGA ATCACAAGCC CAGCAACCC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTGC TTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT 6720 GACCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTCCTGAGAC CCTTCCCAAC 6780 GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGCCCG CACCGATCG CCTTCCCAAC 6900 AGTTGCGACA CCTGAATGCC GAATGGCCT TTGCCTGGTT TCCGGCACCA GAAGCGGTG 6960 AGTTGCGCAG CCTGAATGCC GACTCTCCTG AGGCCCATCT ACACCAAGTT CCCTCCAAC 6900 AGTTGCGCAG CCTGAATGCC GACTCTCCTG AGGCCATCT ACACCAACGT ACCCTACTCC ATTACGGTCA 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT ACCCTACTCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCCACCA CAACTTTTT TGATGGCTT CCTAAACTT 7200 AAAAAATTAA TTTGCTTATA CAACCATCC GAATTTTT TGATGGCTT CCTATTGCT 7200 AAAAAATTAA TTTGCTTATA CAACCATCC GTTTTTTGGG CTTTTCTGAT TATCAACCGG 7320 GGAGCTCCA GGCAATGAC TGATAGCCT TGTTTTGGG CTTTTCTGAT TATCAACCGG 7320 GGACCTTTCT ACCACTC TGATGCCTT TGTAGATCT TCTAAAAATAT TAACGTTTAC 7260 CAGCACTTAT TTATCAGCATC TGATAGCCTT TGTAGATCT TCAAAAAATAT TAACGTTCC 7380 CCGCCATTAAT TTATCAGCATC TGATAGCCTT TGTAGATCT TCAAAAAATAT TAACGTTCC 7440 CCGCCATTAAT TTATCAGCATA GAACGGTTGA TATCAATT TGATTGTCT TGATTTTCCT TGATTTTTCCT TGATTTTTCC 7500 CGGCCTTTCT CACCCTTTTG AAACGGTTGA TTAACACCTCT CCACCAAAAGT 7620 ATTACAGGGT CATAAAAATT TTTACCTTC TGATTAACATT TGACTGTCT CCACCAAAAAT 7560 ATTATGAGGGT TCTAAAAAATT TTTACCTTC TGATTAAAAA AAGGCTTCT CCACCAAAAAT 7620	TCACTCATTA	GGCACCCCAG	GCTTTACACT	TTATGCTTCC	GGCTCGTATG	TTGTGTGGAA	. 6180
AAGCACTATT GCACTGGCAC TCTTACCGTT ACTGTTTACC CCTGTGGCAA AAGCCCAGGT 6360 CCAGCTGCTC GAGTCGGTCT TCCCCCTGGC ACCCTCTCC AAGAGCACCT CTGGGGGCAC 6420 AGCGGCCCTG GGCTGCCTGG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAAC 6480 TCAGGCGCCC TGACCAGCGG CGTGCACACC TTCCCGGCTG TCCTACAGTC CTCAGGACTC 6540 TACTCCCTCA GCAGCGTGGT GACCGTGCCC TCCAGCAGCT TGGGCACCCA GACCTACATC 6660 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTAC CTTCTTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT 6720 GACCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT 6720 GACTTGGGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCG CCTTCCCAAC 6900 ACTTGCGAGA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCG CCTTCCCAAC 6900 ACTTGCGCAC CCTGAATGC GAATGGCGT TTCCCTGAGTA CATTCCAAACAT 7020 AGGCAAAGCTG CCTGGAGTGC GATCTTCCTG AGGCCGATC CCCTCAAACT 7020 AGCAAAGCTG CCTGAAGGA GGCCCATCT ACACCAACGT ACCCAACGT ACCCAACACT ACCCAACACT 7020 AATCAGCAGTT TCTCCCACG GAGAATCCGA CGGGTTGTA CTCGCTCACA TTTACGGTCA 7080 ATCCGCCGTT TCTTCCCACG GAGAATCCGA CGGGTTGTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAACTG CTGATTAAC AAAAATTTAA CGCGAATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTAAC AAAAATTTAA CGCGAATTTT AACCAAAATAT TAACCGTTTA 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACCAAAAATAT TAACCGTTTAC 7380 ATTACAGGCT TTTTCCCAG GAACGCTT TAGTTTTCC TTTTTCCTCA TTTTTTCCTC 7380 CGGCATTAAT TTTGCTTATA CAATCTTCCT TTTTTGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATT TATCAGCTA GAACGGTTGA ATTACATTT TTTTTCTTTTTTTTTT	TTGTGAGCGG	ATAACAATTT	CACACGCGTC	ACTTGGCACT	GGCCGTCGTT	TTACAACGTC	6240
CCAGCTGCTC GAGTCGGTCT TCCCCCTGGC ACCCTCCTC AAGAGCACCT CTGGGGGCAC AGCGGCCCTG GGCTGCCTGG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAAC 6480 TCAGGCGCCC TGACCAGCGG CGTGCACACC TTCCCGGCTG TCCTACAGTC CTCAGGACTC 6540 TACTCCCTCA GCAGCGTGGT GACCGTGCCC TCCAGCAGCT TGGGCACCCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCAGCAACGC CTTCTTAGGC TGAAGGCGAT GACCCTGCTA AGGCTGCAT CAATAGTTTA CAGGCAAGTG CTTCTTAGGC TGAAGGCGAT GACCCTGCTA AGCATCTT AACAAAGCG GCCCAAATCT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC 6780 AGTTTGCGCAG AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGAT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 AGGCAAAGCTG GCTGAATGGC GAATGGCGAT TCCCGAACT TCCGGCACCA GAAGCGGTGC 6960 AGCGCAGATGC CGGCACAACT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTA CTCCGCACCA GAAGCGGTGC 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTA CTCCGCACA TTTAATGTTG 7140 ATGAAAAATGA CTGATTAAC AAAAATTTAA CGCAAACTT TAACGTTA CAACCAACGT AACCAACACT TAACGTTAC 7200 AAAAAATAGA CTGATTAAC AAAAATTTAA CGCGAATTTT TGATGGCGTT CTTATTGGTT 7200 AAAAAATAGA CTGATTAAC AAAAATTTAA CACCAACGT ATCGGTCC CTTTTTGCTC 7380 AAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	GTGACTGGGA	AAACCCTGGC	GTTACCCAAG	CTTTGTACAT	GGAGAAAATA	AAGTGAAACA	6300
AGCGGCCCTG GGCTGCCTGG TCAAGACTAA TTCCCCGAAC CGGTGACGGT GTCGTGGAAC 6480 TCAGGCGCCC TGACCAGCGG CGTGCACACC TTCCCGGCTG TCCTACAGTC CTCAGGACTC 6540 TACTCCCTCA GCAGCGTGGT GACCGTGCCC TCCAGCAGCT TGGGCACCCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTACG CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC 6780 GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACCAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCTC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCCAGCC GAATTATTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATTAAATA TTTGCTTATA CAAAAATTTAA CGCGAATTTT TAACAAAAATAT TAACGTTTAC 7260 AAATTAAAATA TTTGCTTATA CAAAAATTTAA CGCGAATTTT AACAAAAATAT TAACGTTTAC 7260 AAATTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCT TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAT TAACCTTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATACCATTAC TCAAAAATAG CTACCCTCTC 7440 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAAAAATAG CTACCCTCTC 7440 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAAT 7560 ATTACAGGGT TCTAAAAAATT TTTATCCCTTG CGTTGAAATAA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAAATGTTT TTGGTACACC CGATTTAACCT TTATGCTTC CCGCCAAAAGT 7620 ATTACAGGGT CATAAATGTTT TTGGTACACC CGATTTAACCTTC CCGCCAAAAGT 7620	AAGCACTATT	GCACTGGCAC	TCTTACCGTT	ACTGTTTACC	CCTGTGGCAA	AAGCCCAGGT	6360
TCAGGCGCCC TGACCAGCGG CGTGCACACC TTCCCGGCTG TCCTACAGTC CTCAGGACTC 6540 TACTCCCTCA GCAGCGTGGT GACCGTGCCC TCCAGCAGCT TGGGCACCCA GACCTACATC 6600 TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGCACTACG CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC 6780 GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TACGGTCA TAACGTTTAC 7260 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AAATTAAAAAA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCCCA GGCAATGACC TGATAGCCTT TGTAGAACTT TCAAAAAATA TAACGTTTAC 7260 CAGACTCCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAT TACCGTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGTT TGACCTCTC 7440 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAAAAATAT TACCCTTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACACC CGATTTAACC TTATGCTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACACC CGATTTAACC TTATGCTCTC AGGCTTTATT	CCAGCTGCTC	GAGTCGGTCT	TCCCCCTGGC	ACCCTCCTCC	AAGAGCACCT	CTGGGGGCAC	6420
TACTCCCTCA GCAGCGTGGT GACCGTGCCC TCCAGCAGCT TGGGCACCCA GACCTACATC TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT 6660 TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTACG CTTCTTAGGC TGAAGGCGAT 6720 GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC 6780 GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCG TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATCC TAGTTTTACG ATTACCGTTC TCAAAAATAT TAACGTTTAC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACCACTTAC TCAGACATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT CCGCCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT CCGCCAAAAGT 7620	AGCGGCCCTG	GGCTGCCTGG	TCAAGACTAA	TTCCCCGAAC	CGGTGACGGT	GTCGTGGAAC	6480
TGCAACGTGA ATCACAAGCC CAGCAACACC AAGGTGGACA AGAAAGCAGA GCCCAAATCT TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTACG CTTCTTAGGC TGAAGGCGAT GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCCTC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT CCGCCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT CCGCCAAAAGT 7620	TCAGGCGCCC	TGACCAGCGG	CGTGCACACC	TTCCCGGCTG	TCCTACAGTC	CTCAGGACTC	6540
TGTACTAGTG GATCCTACCC GTACGACGTT CCGGACTACG CTTCTTAGGC TGAAGGCGAT GACCCTGCTA AGGCTGATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC 6780 GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCGTC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCT GTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACCATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAAATT TTTATCCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATCAGGGT CATAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCCAAAAGT 7620 ATATCAGGGT CATAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCCAAAAGT 7620 ATTACAGGGT CATAAATGTTT TTGGTACAAC CGATTTAGCT TTATTGCTTG AGGCTTTATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT C	TACTCCCTCA	GCAGCGTGGT	GACCGTGCCC	TCCAGCAGCT	TGGGCACCCA	GACCTACATC	6600
GACCCTGCTA AGGCTGCATT CAATAGTTTA CAGGCAAGTG CTACTGAGTA CATTGGCTAC GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTCCTG AGGCCGATACC GGTCGTCC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAACCGG GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATAG ATTGACATGC TAGTTTTAC ATTACACTT TATCAACCGG 7320 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATT TGACTGTCT 7500 ATATGAGGGT TCTAAAAAATT TTTATCCTTG CGTTGAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATGAGGGT CATAATGTTT TTTATCCTTG CGTTGAAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATGAGGGT CATAATGTTT TTTATCCTTG CGTTGAAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATGAGGGT CATAATGTTT TTTATCCTTG CGTTGAAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATGAGGGT CATAATGTTT TTTATCCTTG CGTTGAAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATATGAGGGT CATAATGTTT TTTATCCTTG CGATTTAGCT TTATGCTCTG AGGCTTTATT	TGCAACGTGA	ATCACAAGCC	CAGCAACACC	AAGGTGGACA	AGAAAGCAGA	GCCCAAATCT	6660
GCTTGGGCTA TGGTAGTAGT TATAGTTGGT GCTACCATAG GGATTAAATT ATTCAAAAAG 6840 TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC 6900 AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCGTC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATTACAGGGT TCTAAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT AGGCTTTATT 7680	TGTACTAGTG	GATCCTACCC	GTACGACGTT	CCGGACTACG	CTTCTTAGGC	TGAAGGCGAT	6720
TTTACGAGCA AGGCTTCTTA AGCAATAGCG AAGAGGCCCG CACCGATCGC CCTTCCCAAC AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC 6960 CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCCT CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCT 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT AGGCTTTATT ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCT AGGCTTTATT 7680	GACCCTGCTA	AGGCTGCATT	CAATAGTTTA	CAGGCAAGTG	CTACTGAGTA	CATTGGCTAC	6780
AGTTGCGCAG CCTGAATGGC GAATGGCGCT TTGCCTGGTT TCCGGCACCA GAAGCGGTGC CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCGTC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAAT 7560 ATATGAGGGT TCTAAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT	GCTTGGGCTA	TGGTAGTAGT	TATAGTTGGT	GCTACCATAG	GGATTAAATT	ATTCAAAAAG	6840
CGGAAAGCTG GCTGGAGTGC GATCTTCCTG AGGCCGATAC GGTCGTCC CCCTCAAACT 7020 GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA 7080 ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAAATAG CTACCCTCTC 7440 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATTACAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	TTTACGAGCA	AGGCTTCTTA	AGCAATAGCG	AAGAGGCCCG	CACCGATCGC	CCTTCCCAAC	6900
GGCAGATGCA CGGTTACGAT GCGCCCATCT ACACCAACGT AACCTATCCC ATTACGGTCA ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT	AGTTGCGCAG	CCTGAATGGC	GAATGGCGCT	TTGCCTGGTT	TCCGGCACCA	GAAGCGGTGC	6960
ATCCGCCGTT TGTTCCCACG GAGAATCCGA CGGGTTGTTA CTCGCTCACA TTTAATGTTG 7140 ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	CGGAAAGCTG	GCTGGAGTGC	GATCTTCCTG	AGGCCGATAC	GGTCGTCGTC	CCCTCAAACT	7020
ATGAAAGCTG GCTACAGGAA GGCCAGACGC GAATTATTTT TGATGGCGTT CCTATTGGTT 7200 AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATTACAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	GGCAGATGCA	CGGTTACGAT	GCGCCCATCT	ACACCAACGT	AACCTATCCC	ATTACGGTCA	7080
AAAAAATGAG CTGATTTAAC AAAAATTTAA CGCGAATTTT AACAAAATAT TAACGTTTAC 7260 AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	ATCCGCCGTT	TGTTCCCACG	GAGAATCCGA	CGGGTTGTTA	CTCGCTCACA	TTTAATGTTG	7140
AATTTAAATA TTTGCTTATA CAATCTTCCT GTTTTTGGGG CTTTTCTGAT TATCAACCGG 7320 GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	ATGAAAGCTG	GCTACAGGAA	GGCCAGACGC	GAATTATTTT	TGATGGCGTT	CCTATTGGTT	7200
GGTACATATG ATTGACATGC TAGTTTTACG ATTACCGTTC ATCGATTCTC TTGTTTGCTC 7380 CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	AAAAAATGAG	CTGATTTAAC	AAAAATTTAA	CGCGAATTTT	AACAAAATAT	TAACGTTTAC	7260
CAGACTCTCA GGCAATGACC TGATAGCCTT TGTAGATCTC TCAAAAATAG CTACCCTCTC 7440 CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	AATTTAAATA	TTTGCTTATA	CAATCTTCCT	${\tt GTTTTTGGGG}$	CTTTTCTGAT	TATCAACCGG	7320
CGGCATTAAT TTATCAGCTA GAACGGTTGA ATATCATATT GATGGTGATT TGACTGTCTC 7500 CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT 7560 ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	GGTACATATG	ATTGACATGC	TAGTTTTACG	ATTACCGTTC	ATCGATTCTC	TTGTTTGCTC	7380
CGGCCTTTCT CACCCTTTTG AATCTTTACC TACACATTAC TCAGGCATTG CATTTAAAAT ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7560 7680	CAGACTCTCA	GGCAATGACC	TGATAGCCTT	TGTAGATCTC	TCAAAAATAG	CTACCCTCTC	7440
ATATGAGGGT TCTAAAAATT TTTATCCTTG CGTTGAAATA AAGGCTTCTC CCGCAAAAGT 7620 ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	CGGCATTAAT	TTATCAGCTA	GAACGGTTGA	ATATCATATT	GATGGTGATT	TGACTGTCTC	7500
ATTACAGGGT CATAATGTTT TTGGTACAAC CGATTTAGCT TTATGCTCTG AGGCTTTATT 7680	CGGCCTTTCT	CACCCTTTTG	AATCTTTACC	TACACATTAC	TCAGGCATTG	CATTTAAAAT	7560
	ATATGAGGGT	TCTAAAAATT	TTTATCCTTG	CGTTGAAATA	AAGGCTTCTC	CCGCAAAAGT	7620
GCTTAATTTT GCTAATTCTT TGCCTTGCCT GTATGATTTA TTGGACGTT 7729	ATTACAGGGT	CATAATGTTT	TTGGTACAAC	CGATTTAGCT	TTATGCTCTG	AGGCTTTATT	7680
	GCTTAATTTT	GCTAATTCTT	TGCCTTGCCT	GTATGATTTA	TTGGACGTT		7729

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 7557 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: both
 - (D) TOPOLOGY: circular

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

AATGCTACTA	CTATTAGTAG	AATTGATGCC	ACCTTTTCAG	CTCGCGCCCC	AAATGAAAAT	60
ATAGCTAAAC	AGGTTATTGA	CCATTTGCGA	AATGTATCTA	ATGGTCAAAC	TAAATCTACT	120
CGTTCGCAGA	ATTGGGAATC	AACTGTTACA	TGGAATGAAA	CTTCCAGACA	CCGTACTTTA	180
GTTGCATATT	TAAAACATGT	TGAGCTACAG	CACCAGATTC	AGCAATTAAG	CTCTAAGCCA	240

TCCGCAAAAA TGACCTCTTA TCAAAAGGAG CAATTAAAGG TACTCTCTAA TCCTGACCTG TTGGAGTTTG CTTCCGGTCT GGTTCGCTTT GAAGCTCGAA TTAAAACGCG ATATTTGAAG 360 TCTTTCGGGC TTCCTCTTAA TCTTTTTGAT GCAATCCGCT TTGCTTCTGA CTATAATAGT 420 CAGGGTAAAG ACCTGATTTT TGATTTATGG TCATTCTCGT TTTCTGAACT GTTTAAAGCA 480 TTTGAGGGGG ATTCAATGAA TATTTATGAC GATTCCGCAG TATTGGACGC TATCCAGTCT 540 AAACATTTTA CTATTACCCC CTCTGGCAAA ACTTCTTTTG CAAAAGCCTC TCGCTATTTT 600 GGTTTTTATC GTCGTCTGGT AAACGAGGGT TATGATAGTG TTGCTCTTAC TATGCCTCGT 660 AATTCCTTTT GGCGTTATGT ATCTGCATTA GTTGAATGTG GTATTCCTAA ATCTCAACTG 720 ATGAATCTTT CTACCTGTAA TAATGTTGTT CCGTTAGTTC GTTTTATTAA CGTAGATTTT 780 TCTTCCCAAC GTCCTGACTG GTATAATGAG CCAGTTCTTA AAATCGCATA AGGTAATTCA 840 CAATGATTAA AGTTGAAATT AAACCATCTC AAGCCCAATT TACTACTCGT TCTGGTGTTT 900 CTCGTCAGGG CAAGCCTTAT TCACTGAATG AGCAGCTTTG TTACGTTGAT TTGGGTAATG 960 AATATCCGGT TCTTGTCAAG ATTACTCTTG ATGAAGGTCA GCCAGCCTAT GCGCCTGGTC 1020 TGTACACCGT TCATCTGTCC TCTTTCAAAG TTGGTCAGTT CGGTTCCCTT ATGATTGACC 1080 GTCTGCGCCT CGTTCCGGCT AAGTAACATG GAGCAGGTCG CGGATTTCGA CACAATTTAT 1140 CAGGCGATGA TACAAATCTC CGTTGTACTT TGTTTCGCGC TTGGTATAAT CGCTGGGGGT 1200 CAAAGATGAG TGTTTTAGTG TATTCTTTCG CCTCTTTCGT TTTAGGTTGG TGCCTTCGTA 1260 GTGGCATTAC GTATTTTACC CGTTTAATGG AAACTTCCTC ATGAAAAAGT CTTTAGTCCT 1320 CAAAGCCTCT GTAGCCGTTG CTACCCTCGT TCCGATGCTG TCTTTCGCTG CTGAGGGTGA 1380 CGATCCCGCA AAAGCGGCCT TTAACTCCCT GCAAGCCTCA GCGACCGAAT ATATCGGTTA 1440 TGCGTGGCCG ATGGTTGTTG TCATTGTCGG CGCAACTATC GGTATCAAGC TGTTTAAGAA 1500 ATTCACCTCG AAAGCAAGCT GATAAACCGA TACAATTAAA GGCTCCTTTT GGAGCCTTTT 1560 TTTTTGGAGA TTTTCAACGT GAAAAATTA TTATTCGCAA TTCCTTTAGT TGTTCCTTTC 1620 TATTCTCACT CCGCTGAAAC TGTTGAAAGT TGTTTAGCAA AACCCCATAC AGAAAATTCA 1680 TTTACTAACG TCTGGAAAGA CGACAAAACT TTAGATCGTT ACGCTAACTA TGAGGGTTGT 1740 CTGTGGAATG CTACAGGCGT TGTAGTTTGT ACTGGTGACG AAACTCAGTG TTACGGTACA 1800 TGGGTTCCTA TTGGGCTTGC TATCCCTGAA AATGAGGGTG GTGGCTCTGA GGGTGGCGGT 1860 TCTGAGGGTG GCGGTTCTGA GGGTGGCGGT ACTAAACCTC CTGAGTACGG TGATACACCT 1920 ATTCCGGGCT ATACTTATAT CAACCCTCTC GACGGCACTT ATCCGCCTGG TACTGAGCAA 1980 AACCCCGCTA ATCCTAATCC TTCTCTTGAG GAGTCTCAGC CTCTTAATAC TTTCATGTTT 2040 CAGAATAATA GGTTCCGAAA TAGGCAGGGG GCATTAACTG TTTATACGGG CACTGTTACT 2100 CAAGGCACTG ACCCCGTTAA AACTTATTAC CAGTACACTC CTGTATCATC AAAAGCCATG 2160 TATGACGCTT ACTGGAACGG TAAATTCAGA GACTGCGCTT TCCATTCTGG CTTTAATGAA 2220 GATCCATTCG TTTGTGAATA TCAAGGCCAA TCGTCTGACC TGCCTCAACC TCCTGTCAAT 2280 GCTGGCGGC GCTCTGGTG TGGTTCTGGT GGCGGCTCTG AGGGTGGTGG CTCTGAGGGT 2340 GGCGGTTCTG AGGGTGGCGG CTCTGAGGGA GGCGGTTCCG GTGGTGGCTC TGGTTCCGGT 2400 GATTTTGATT ATGAAAAGAT GGCAAACGCT AATAAGGGGG CTATGACCGA AAATGCCGAT 2460 GAAAACGCGC TACAGTCTGA CGCTAAAGGC AAACTTGATT CTGTCGCTAC TGATTACGGT 2520 GCTGCTATCG ATGGTTCAT TGGTGACGTT TCCGGCCTTG CTAATGGTAA TGGTGCTACT 2580 2640 GGTGATTTTG CTGGCTCTAA TTCCCAAATG GCTCAAGTCG GTGACGGTGA TAATTCACCT TTAATGAATA ATTTCCGTCA ATATTTACCT TCCCTCCTC AATCGGTTGA ATGTCGCCCT 2700 TTTGTCTTTA GCGCTGGTAA ACCATATGAA TTTTCTATTG ATTGTGACAA AATAAACTTA TTCCGTGGTG TCTTTGCGTT TCTTTTATAT GTTGCCACCT TTATGTATGT ATTTTCTACG 2820 TTTGCTAACA TACTGCGTAA TAAGGAGTCT TAATCATGCC AGTTCTTTTG GGTATTCCGT 2880 TATTATTGCG TTTCCTCGGT TTCCTTCTGG TAACTTTGTT CGGCTATCTG CTTACTTTTC 2940 TTAAAAAGGG CTTCGGTAAG ATAGCTATTG CCTGTTTCTT GCTCTTATTA TTGGGCTTAA 3000 CTCAATTCTT GTGGGTTATC TCTCTGATAT TAGCGCTCAA TTACCCTCTG ACTTTGTTCA 3060 GGGTGTTCAG TTAATTCTCC CGTCTAATGC GCTTCCCTGT TTTTATGTTA TTCTCTCTGT 3120 AAAGGCTGCT ATTTTCATTT TTGACGTTAA ACAAAAAATC GTTTCTTATT TGGATTGGGA 3180 TAAATAATAT GGCTGTTTAT TTTGTAACTG GCAAATTAGG CTCTGGAAAG ACGCTCGTTA 3240 GCGTTGGTAA GATTCAGGAT AAAATTGTAG CTGGGTGCAA AATAGCAACT AATCTTGATT 3300 TAAGGCTTCA AAACCTCCCG CAAGTCGGGA GGTTCGCTAA AACGCCTCGC GTTCTTAGAA 3360 TACCGGATAA GCCTTCTATA TCTGATTTGC TTGCTATTGG GCGCGGTAAT GATTCCTACG 3420 ATGAAAATAA AAACGCTTG CTTGTTCTCG ATGAGTGCGG TACTTGGTTT AATACCCGTT 3480 CTTGGAATGA TAAGGAAAGA CAGCCGATTA TTGATTGGTT TCTACATGCT CGTAAATTAG GATGGGATAT TATTTTCTT GTTCAGGACT TATCTATTGT TGATAAACAG GCGCGTTCTG 3600 CATTAGCTGA ACATGTTGTT TATTGTCGTC GTCTGGACAG AATTACTTTA CCTTTTGTCG 3660

GTACTTTATA TTCTCTTATT ACTGGCTCGA AAATGCCTCT GCCTAAATTA CATGTTGGCG TTGTTAAATA TGGCGATTCT CAATTAAGCC CTACTGTTGA GCGTTGGCTT TATACTGGTA 3780 AGAATTTGTA TAACGCATAT GATACTAAAC AGGCTTTTTC TAGTAATTAT GATTCCGGTG 3840 TTTATCTTA TTTAACGCCT TATTTATCAC ACGGTCGGTA TTTCAAACCA TTAAATTTAG 3900 GTCAGAAGAT GAAGCTTACT AAAATATATT TGAAAAAGTT TTCACGCGTT CTTTGTCTTG 3960 CGATTGGATT TGCATCAGCA TTTACATATA GTTATATAAC CCAACCTAAG CCGGAGGTTA 4020 AAAAGGTAGT CTCTCAGACC TATGATTTTG ATAAATTCAC TATTGACTCT TCTCAGCGTC 4080 TTAATCTAAG CTATCGCTAT GTTTTCAAGG ATTCTAAGGG AAAATTAATT AATAGCGACG 4140 ATTTACAGAA GCAAGGTTAT TCACTCACAT ATATTGATTT ATGTACTGTT TCCATTAAAA 4200 AAGGTAATTC AAATGAAATT GTTAAATGTA ATTAATTTTG TTTTCTTGAT GTTTGTTTCA 4260 TCATCTTCTT TTGCTCAGGT AATTGAAATG AATAATTCGC CTCTGCGCGA TTTTGTAACT 4320 TGGTATTCAA AGCAATCAGG CGAATCCGTT ATTGTTTCTC CCGATGTAAA AGGTACTGTT 4380 ACTGTATATT CATCTGACGT TAAACCTGAA AATCTACGCA ATTTCTTTAT TTCTGTTTTA 4440 CGTGCTAATA ATTTTGATAT GGTTGGTTCA ATTCCTTCCA TAATTCAGAA GTATAATCCA 4500 AACAATCAGG ATTATATTGA TGAATTGCCA TCATCTGATA ATCAGGAATA TGATGATAAT 4560 TCCGCTCCTT CTGGTGGTTT CTTTGTTCCG CAAAATGATA ATGTTACTCA AACTTTTAAA 4620 ATTAATAACG TTCGGGCAAA GGATTTAATA CGAGTTGTCG AATTGTTTGT AAAGTCTAAT 4680 ACTTCTAAAT CCTCAAATGT ATTATCTATT GACGGCTCTA ATCTATTAGT TGTTAGTGCA 4740 CCTAAAGATA TTTTAGATAA CCTTCCTCAA TTCCTTTCTA CTGTTGATTT GCCAACTGAC 4800 CAGATATTGA TTGAGGGTTT GATATTTGAG GTTCAGCAAG GTGATGCTTT AGATTTTTCA 4860 TTTGCTGCTG GCTCTCAGCG TGGCACTGTT GCAGGCGGTG TTAATACTGA CCGCCTCACC 4920 TCTGTTTTAT CTTCTGCTGG TGGTTCGTTC GGTATTTTTA ATGGCGATGT TTTAGGGCTA 4980 TCAGTTCGCG CATTAAAGAC TAATAGCCAT TCAAAAATAT TGTCTGTGCC ACGTATTCTT 5040 ACGCTTTCAG GTCAGAAGGG TTCTATCTCT GTTGGCCAGA ATGTCCCTTT TATTACTGGT 5100 CGTGTGACTG GTGAATCTGC CAATGTAAAT AATCCATTTC AGACGATTGA GCGTCAAAAT 5160 GTAGGTATTT CCATGAGCGT TTTTCCTGTT GCAATGGCTG GCGGTAATAT TGTTCTGGAT 5220 ATTACCAGCA AGGCCGATAG TTTGAGTTCT TCTACTCAGG CAAGTGATGT TATTACTAAT CAAAGAAGTA TTGCTACAAC GGTTAATTTG CGTGATGGAC AGACTCTTTT ACTCGGTGGC 5340 CTCACTGATT ATAAAAACAC TTCTCAAGAT TCTGGCGTAC CGTTCCTGTC TAAAATCCCT 5400 TTAATCGGCC TCCTGTTTAG CTCCCGCTCT GATTCCAACG AGGAAAGCAC GTTATACGTG 5460 CTCGTCAAAG CAACCATAGT ACGCGCCCTG TAGCGGCGCA TTAAGCGCGG CGGGTGTGGT 5520 GGTTACGCGC AGCGTGACCG CTACACTTGC CAGCGCCCTA GCGCCCGCTC CTTTCGCTTT 5580 CTTCCCTTCC TTTCTCGCCA CGTTCGCCGG CTTTCCCCGT CAAGCTCTAA ATCGGGGGCT 5640 CCCTTTAGGG TTCCGATTTA GTGCTTTACG GCACCTCGAC CCCAAAAAAC TTGATTTGGG 5700 TGATGGTTCA CGTAGTGGGC CATCGCCCTG ATAGACGGTT TTTCGCCCTT TGACGTTGGA 5760 GTCCACGTTC TTTAATAGTG GACTCTTGTT CCAAACTGGA ACAACACTCA ACCCTATCTC 5820 GGGCTATTCT TTTGATTTAT AAGGGATTTT GCCGATTTCG GAACCACCAT CAAACAGGAT 5880 TTTCGCCTGC TGGGGCAAAC CAGCGTGGAC CGCTTGCTGC AACTCTCTCA GGGCCAGGCG 5940 GTGAAGGCA ATCAGCTGTT GCCCGTCTCG CTGGTGAAAA GAAAAACCAC CCTGGCGCCC 6000 AATACGCAAA CCGCCTCTCC CCGCGCGTTG GCCGATTCAT TAATGCAGCT GGCACGACAG 6060 GTTTCCCGAC TGGAAAGCGG GCAGTGAGCG CAACGCAATT AATGTGAGTT AGCTCACTCA 6120 TTAGGCACCC CAGGCTTTAC ACTTTATGCT TCCGGCTCGT ATGTTGTGT GAATTGTGAG 6180 CGGATAACAA TTTCACACGC CAAGGAGACA GTCATAATGA AATACCTATT GCCTACGGCA 6240 GCCGCTGGAT TGTTATTACT CGCTGCCCAA CCAGCCATGG CCGAGCTCTT CCCGCCATCT 6300 GATGAGCAGT TGAAATCTGG AACTGCCTCT GTTGTGTGCC TGCTGAATAA CTTCTATCCC 6360 AGAGAGGCCA AAGTACAGTG GAAGGTGGAT AACGCCCTCC AATCGGGTAA CTCCCAGGAG 6420 AGTGTCACAG AGCAGGACAG CAAGGACAGC ACCTACAGCC TCAGCAGCAC CCTGACGCTG 6480 AGCAAAGCAG ACTACGAGAA ACACAAAGTC TACGCCTGCG AAGTCACCCA TCAGGGCCTG 6540 AGCTCGCCCG TCACAAGAG CTTCAACAGG GGAGAGTGTT CTAGAACGCG TCACTTGGCA 6600 CTGGCCGTCG TTTTACAACG TCGTGACTGG GAAAACCCTG GCGTTACCCA AGCTTAATCG 6660 CCTTGCAGAA TTCCCTTTCG CCAGCTGGCG TAATAGCGAA GAGGCCCGCA CCGATCGCCC 6720 TTCCCAACAG TTGCGCAGCC TGAATGGCGA ATGGCGCTTT GCCTGGTTTC CGGCACCAGA 6780 AGCGGTGCCG GAAAGCTGGC TGGAGTGCGA TCTTCCTGAG GCCGATACGG TCGTCGTCCC 6840 CTCAAACTGG CAGATGCACG GTTACGATGC GCCCATCTAC ACCAACGTAA CCTATCCCAT 6900 TACGGTCAAT CCGCCGTTTG TTCCCACGGA GAATCCGACG GGTTGTTACT CGCTCACATT 6960 TAATGTTGAT GAAAGCTGGC TACAGGAAGG CCAGACGCGA ATTATTTTTG ATGGCGTTCC 7020 TATTGGTTAA AAAATGAGCT GATTTAACAA AAATTTAACG CGAATTTTAA CAAAATATTA 7080

ACGTTTACAA TTTAAATATT TGCTTATACA ATCTTCCTGT TTTTGGGGCT TTTCTGATTA
TCAACCGGGG TACATATGAT TGACATGCTA GTTTTACGAT TACCGTTCAT CGATTCTCTT
GTTTGCTCCA GACTCTCAGG CAATGACCTG ATAGCCTTTG TAGATCTCTC AAAAATAGCT 7260
ACCCTCTCCG GCATTAATTT ATCAGCTAGA ACGGTTGAAT ATCATATTGA TGGTGATTG 7320
ACTGTCTCCG GCCTTTCTCA CCCTTTTGAA TCTTTACCTA CACATTACTC AGGCATTGCA 7380
TTTAAAAATAT ATGAGGGTTC TAAAAATTTT TATCCTTGCG TTGAAATAAA GGCTTCTCCC 7440
GCAAAAGTAT TACAGGGTCA TAATGTTTTT GGTACAACCG ATTTAGCTTT ATGCTCTGAG 7500
GCTTTATTGC TTAATTTTGC TAATTCTTTG CCTTGCCTGT ATGATTTATT GGATGTT 7557

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8118 base pairs

(B) TYPE: nucleic acid(C) STRANDEDNESS: both

(D) TOPOLOGY: circular

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

AATGCTACTA CTATTAGTAG AATTGATGCC ACCTTTTCAG CTCGCGCCCC AAATGAAAAT 60 ATAGCTAAAC AGGTTATTGA CCATTTGCGA AATGTATCTA ATGGTCAAAC TAAATCTACT 120 CGTTCGCAGA ATTGGGAATC AACTGTTACA TGGAATGAAA CTTCCAGACA CCGTACTTTA 180 GTTGCATATT TAAAACATGT TGAGCTACAG CACCAGATTC AGCAATTAAG CTCTAAGCCA 240 TCTGCAAAAA TGACCTCTTA TCAAAAGGAG CAATTAAAGG TACTCTCTAA TCCTGACCTG 300 TTGGAGTTTG CTTCCGGTCT GGTTCGCTTT GAAGCTCGAA TTAAAACGCG ATATTTGAAG 360 TCTTTCGGGC TTCCTCTTAA TCTTTTTGAT GCAATCCGCT TTGCTTCTGA CTATAATAGT 420 CAGGGTAAAG ACCTGATTTT TGATTTATGG TCATTCTCGT TTTCTGAACT GTTTAAAGCA 480 TTTGAGGGGG ATTCAATGAA TATTTATGAC GATTCCGCAG TATTGGACGC TATCCAGTCT 540 AAACATTTTA CTATTACCCC CTCTGGCAAA ACTTCTTTTG CAAAAGCCTC TCGCTATTTT 600 GGTTTTTATC GTCGTCTGGT AAACGAGGGT TATGATAGTG TTGCTCTTAC TATGCCTCGT 660 AATTCCTTTT GGCGTTATGT ATCTGCATTA GTTGAATGTG GTATTCCTAA ATCTCAACTG 720 ATGAATCTTT CTACCTGTAA TAATGTTGTT CCGTTAGTTC GTTTTATTAA CGTAGATTTT 780 TCTTCCCAAC GTCCTGACTG GTATAATGAG CCAGTTCTTA AAATCGCATA AGGTAATTCA 840 CAATGATTAA AGTTGAAATT AAACCATCTC AAGCCCAATT TACTACTCGT TCTGGTGTTT 900 CTCGTCAGGG CAAGCCTTAT TCACTGAATG AGCAGCTTTG TTACGTTGAT TTGGGTAATG 960 AATATCCGGT TCTTGTCAAG ATTACTCTTG ATGAAGGTCA GCCAGCCTAT GCGCCTGGTC 1020 TGTACACCGT TCATCTGTCC TCTTTCAAAG TTGGTCAGTT CGGTTCCCTT ATGATTGACC 1080 GTCTGCGCCT CGTTCCGGCT AAGTAACATG GAGCAGGTCG CGGATTTCGA CACAATTTAT 1140 CAGGCGATGA TACAAATCTC CGTTGTACTT TGTTTCGCGC TTGGTATAAT CGCTGGGGGT 1200 CAAAGATGAG TGTTTTAGTG TATTCTTTCG CCTCTTTCGT TTTAGGTTGG TGCCTTCGTA 1260 GTGGCATTAC GTATTTTACC CGTTTAATGG AAACTTCCTC ATGAAAAAGT CTTTAGTCCT 1320 CAAAGCCTCT GTAGCCGTTG CTACCCTCGT TCCGATGCTG TCTTTCGCTG CTGAGGGTGA 1380 CGATCCCGCA AAAGCGGCCT TTAACTCCCT GCAAGCCTCA GCGACCGAAT ATATCGGTTA 1440 TGCGTGGGCG ATGGTTGTTG TCATTGTCGG CGCAACTATC GGTATCAAGC TGTTTAAGAA 1500 ATTCACCTCG AAAGCAAGCT GATAAACCGA TACAATTAAA GGCTCCTTTT GGAGCCTTTT 1560 TTTTTGGAGA TTTTCAACGT GAAAAAATTA TTATTCGCAA TTCCTTTAGT TGTTCCTTTC 1620 TATTCTCACT CCGCTGAAAC TGTTGAAAGT TGTTTAGCAA AACCCCATAC AGAAAATTCA 1680 TTTACTAACG TCTGGAAAGA CGACAAAACT TTAGATCGTT ACGCTAACTA TGAGGGTTGT 1740 CTGTGGAATG CTACAGGCGT TGTAGTTTGT ACTGGTGACG AAACTCAGTG TTACGGTACA 1800 TGGGTTCCTA TTGGGCTTGC TATCCCTGAA AATGAGGGTG GTGGCTCTGA GGGTGGCGGT 1860 TCTGAGGGTG GCGGTTCTGA GGGTGGCGGT ACTAAACCTC CTGAGTACGG TGATACACCT 1920 ATTCCGGGCT ATACTTATAT CAACCCTCTC GACGGCACTT ATCCGCCTGG TACTGAGCAA 1980 AACCCCGCTA ATCCTAATCC TTCTCTTGAG GAGTCTCAGC CTCTTAATAC TTTCATGTTT 2040 CAGAATAATA GGTTCCGAAA TAGGCAGGGG GCATTAACTG TTTATACGGG CACTGTTACT 2100 CAAGGCACTG ACCCCGTTAA AACTTATTAC CAGTACACTC CTGTATCATC AAAAGCCATG 2160 TATGACGCTT ACTGGAACGG TAAATTCAGA GACTGCGCTT TCCATTCTGG CTTTAATGAA 2220 GATCCATTCG TTTGTGAATA TCAAGGCCAA TCGTCTGACC TGCCTCAACC TCCTGTCAAT 2280 GCTGGCGGCG GCTCTGGTGG TGGTTCTGGT GGCGGCTCTG AGGGTGGTGG CTCTGAGGGT 2340

GGCGGTTCTG AGGGTGGCGG CTCTGAGGGA GGCGGTTCCG GTGGTGGCTC TGGTTCCGGT 2400 GATTTTGATT ATGAAAAGAT GGCAAACGCT AATAAGGGGG CTATGACCGA AAATGCCGAT 2460 GAAAACGCGC TACAGTCTGA CGCTAAAGGC AAACTTGATT CTGTCGCTAC TGATTACGGT 2520 GCTGCTATCG ATGGTTCAT TGGTGACGTT TCCGGCCTTG CTAATGGTAA TGGTGCTACT 2580 GGTGATTTTG CTGGCTCTAA TTCCCAAATG GCTCAAGTCG GTGACGGTGA TAATTCACCT 2640 TTAATGAATA ATTTCCGTCA ATATTTACCT TCCCTCCCTC AATCGGTTGA ATGTCGCCCT TTTGTCTTTA GCGCTGGTAA ACCATATGAA TTTTCTATTG ATTGTGACAA AATAAACTTA 2760 TTCCGTGGTG TCTTTGCGTT TCTTTTATAT GTTGCCACCT TTATGTATGT ATTTTCTACG 2820 TTTGCTAACA TACTGCGTAA TAAGGAGTCT TAATCATGCC AGTTCTTTTG GGTATTCCGT 2880 TATTATTGCG TTTCCTCGGT TTCCTTCTGG TAACTTTGTT CGGCTATCTG CTTACTTTTC 2940 TTAAAAAGGG CTTCGGTAAG ATAGCTATTG CTATTTCATT GTTTCTTGCT CTTATTATTG 3000 GGCTTAACTC AATTCTTGTG GGTTATCTCT CTGATATTAG CGCTCAATTA CCCTCTGACT TTGTTCAGGG TGTTCAGTTA ATTCTCCCGT CTAATGCGCT TCCCTGTTTT TATGTTATTC 3120 TCTCTGTAAA GGCTGCTATT TTCATTTTTG ACGTTAAACA AAAAATCGTT TCTTATTTGG 3180 ATTGGGATAA ATAATATGGC TGTTTATTTT GTAACTGGCA AATTAGGCTC TGGAAAGACG 3240 CTCGTTAGCG TTGGTAAGAT TCAGGATAAA ATTGTAGCTG GGTGCAAAAT AGCAACTAAT 3300 CTTGATTTAA GGCTTCAAAA CCTCCCGCAA GTCGGGAGGT TCGCTAAAAC GCCTCGCGTT 3360 CTTAGAATAC CGGATAAGCC TTCTATATCT GATTTGCTTG CTATTGGGCG CGGTAATGAT 3420 TCCTACGATG AAAATAAAAA CGGCTTGCTT GTTCTCGATG AGTGCGGTAC TTGGTTTAAT 3480 ACCCGTTCTT GGAATGATAA GGAAAGACAG CCGATTATTG ATTGGTTTCT ACATGCTCGT 3540 AAATTAGGAT GGGATATTAT TTTTCTTGTT CAGGACTTAT CTATTGTTGA TAAACAGGCG 3600 CGTTCTGCAT TAGCTGAACA TGTTGTTTAT TGTCGTCGTC TGGACAGAAT TACTTTACCT 3660 TTTGTCGGTA CTTTATATTC TCTTATTACT GGCTCGAAAA TGCCTCTGCC TAAATTACAT 3720 GTTGGCGTTG TTAAATATGG CGATTCTCAA TTAAGCCCTA CTGTTGAGCG TTGGCTTTAT 3780 ACTGGTAAGA ATTTGTATAA CGCATATGAT ACTAAACAGG CTTTTTCTAG TAATTATGAT 3840 TCCGGTGTTT ATTCTTATTT AACGCCTTAT TTATCACACG GTCGGTATTT CAAACCATTA AATTTAGGTC AGAAGATGAA GCTTACTAAA ATATATTTGA AAAAGTTTTC ACGCGTTCTT 3960 TGTCTTGCGA TTGGATTTGC ATCAGCATTT ACATATAGTT ATATAACCCA ACCTAAGCCG 4020 GAGGTTAAAA AGGTAGTCTC TCAGACCTAT GATTTTGATA AATTCACTAT TGACTCTTCT 4080 CAGCGTCTTA ATCTAAGCTA TCGCTATGTT TTCAAGGATT CTAAGGGAAA ATTAATTAAT 4140 AGCGACGATT TACAGAAGCA AGGTTATTCA CTCACATATA TTGATTTATG TACTGTTTCC 4200 ATTAAAAAG GTAATTCAAA TGAAATTGTT AAATGTAATT AATTTTGTTT TCTTGATGTT 4260 TGTTTCATCA TCTTCTTTTG CTCAGGTAAT TGAAATGAAT AATTCGCCTC TGCGCGATTT 4320 TGTAACTTGG TATTCAAAGC AATCAGGCGA ATCCGTTATT GTTTCTCCCG ATGTAAAAGG 4380 TACTGTTACT GTATATTCAT CTGACGTTAA ACCTGAAAAT CTACGCAATT TCTTTATTTC 4440 TGTTTTACGT GCTAATAATT TTGATATGGT TGGTTCAATT CCTTCCATAA TTCAGAAGTA 4500 TAATCCAAAC AATCAGGATT ATATTGATGA ATTGCCATCA TCTGATAATC AGGAATATGA 4560 TGATAATTCC GCTCCTTCTG GTGGTTTCTT TGTTCCGCAA AATGATAATG TTACTCAAAC 4620 TTTTAAAATT AATAACGTTC GGGCAAAGGA TTTAATACGA GTTGTCGAAT TGTTTGTAAA 4680 GTCTAATACT TCTAAATCCT CAAATGTATT ATCTATTGAC GGCTCTAATC TATTAGTTGT 4740 TAGTGCACCT AAAGATATTT TAGATAACCT TCCTCAATTC CTTTCTACTG TTGATTTGCC AACTGACCAG ATATTGATTG AGGGTTTGAT ATTTGAGGTT CAGCAAGGTG ATGCTTTAGA 4860 TTTTTCATTT GCTGCTGGCT CTCAGCGTGG CACTGTTGCA GGCGGTGTTA ATACTGACCG 4920 CCTCACCTCT GTTTTATCTT CTGCTGGTGG TTCGTTCGGT ATTTTTAATG GCGATGTTTT 4980 AGGGCTATCA GTTCGCGCAT TAAAGACTAA TAGCCATTCA AAAATATTGT CTGTGCCACG 5040 TATTCTTACG CTTTCAGGTC AGAAGGGTTC TATCTCTGTT GGCCAGAATG TCCCTTTTAT 5100 TACTGGTCGT GTGACTGGTG AATCTGCCAA TGTAAATAAT CCATTTCAGA CGATTGAGCG 5160 TCAAAATGTA GGTATTTCCA TGAGCGTTTT TCCTGTTGCA ATGGCTGGCG GTAATATTGT 5220 TCTGGATATT ACCAGCAAGG CCGATAGTTT GAGTTCTTCT ACTCAGGCAA GTGATGTTAT 5280 TACTAATCAA AGAAGTATTG CTACAACGGT TAATTTGCGT GATGGACAGA CTCTTTTACT 5340 CGGTGGCCTC ACTGATTATA AAAACACTTC TCAAGATTCT GGCGTACCGT TCCTGTCTAA 5400 AATCCCTTTA ATCGGCCTCC TGTTTAGCTC CCGCTCTGAT TCCAACGAGG AAAGCACGTT 5460 ATACGTGCTC GTCAAAGCAA CCATAGTACG CGCCCTGTAG CGCCGCATTA AGCGCGGCGG 5520 GTGTGGTGGT TACGCGCAGC GTGACCGCTA CACTTGCCAG CGCCCTAGCG CCCGCTCCTT 5580 TCGCTTTCTT CCCTTCCTTT CTCGCCACGT TCGCCGGCTT TCCCCGTCAA GCTCTAAATC 5640 GGGGGCTCCC TTTAGGGTTC CGATTTAGTG CTTTACGGCA CCTCGACCCC AAAAAACTTG 5700 ATTTGGGTGA TGGTTCACGT AGTGGGCCAT CGCCCTGATA GACGGTTTTT CGCCCTTTGA 5760 CGTTGGAGTC CACGTTCTTT AATAGTGGAC TCTTGTTCCA AACTGGAACA ACACTCAACC 5820 CTATCTCGGG CTATTCTTTT GATTTATAAG GGATTTTGCC GATTTCGGAA CCACCATCAA 5880 ACAGGATTTT CGCCTGCTGG GGCAAACCAG CGTGGACCGC TTGCTGCAAC TCTCTCAGGG 5940 CCAGGCGGTG AAGGGCAATC AGCTGTTGCC CGTCTCGCTG GTGAAAAGAA AAACCACCCT 6000 GGCGCCCAAT ACGCAAACCG CCTCTCCCCG CGCGTTGGCC GATTCATTAA TGCAGCTGGC 6060 ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA CGCAATTAAT GTGAGTTAGC 6120 TCACTCATTA GGCACCCCAG GCTTTACACT TTATGCTTCC GGCTCGTATG TTGTGTGGAA 6180 TTGTGAGCGG ATAACAATTT CACACGCCAA GGAGACAGTC ATAATGAAAT ACCTATTGCC 6240 TACGGCAGCC GCTGGATTGT TATTACTCGC TGCCCAACCA GCCATGGCCG AGCTCTTCCC 6300 GCCATCTGAT GAGCAGTTGA AATCTGGAAC TGCCTCTGTT GTGTGCCTGC TGAATAACTT 6360 CTATCCCAGA GAGGCCAAAG TACAGTGGAA GGTGGATAAC GCCCTCCAAT CGGGTAACTC 6420 CCAGGAGAGT GTCACAGAGC AGGACAGCAA GGACAGCACC TACAGCCTCA GCAGCACCCT 6480 GACGCTGAGC AAAGCAGACT ACGAGAAACA CAAAGTCTAC GCCTGCGAAG TCACCCATCA 6540 GGGCCTGAGC TCGCCCGTCA CAAAGAGCTT CAACAGGGGA GAGTGTTCTA GAACGCGTCA 6600 CTTGGCACTG GCCGTCGTTT TACAACGTCG TGACTGGGAA AACCCTGGCG TTACCCAAGC 6660 TTTGTACATG GAGAAAATAA AGTGAAACAA AGCACTATTG CACTGGCACT CTTACCGTTA 6720 CTGTTTACCC CTGTGGCAAA AGCCGCCTCC ACCAAGGGCC CATCGGTCTT CCCCCTGGCA 6780 CCCTCCTCA AGAGCACCTC TGGGGGCACA GCGGCCCTGG GCTGCCTGGT CAAGACTAAT 6840 TCCCCGAACC GGTGACGGTG TCGTGGAACT CAGGCGCCCT GACCAGCGGC GTGCACACCT 6900 TCCCGGCTGT CCTACAGTCC TCAGGACTCT ACTCCCTCAG CAGCGTGGTG ACCGTGCCCT 6960 CCAGCAGCTT GGGCACCCAG ACCTACATCT GCAACGTGAA TCACAAGCCC AGCAACACCA 7020 AGGTGGACAA GAAAGCAGAG CCCAAATCTT GTACTAGTGG ATCCTACCCG TACGACGTTC 7080 CGGACTACGC TTCTTAGGCT GAAGGCGATG ACCCTGCTAA GGCTGCATTC AATAGTTTAC 7140 AGGCAAGTGC TACTGAGTAC ATTGGCTACG CTTGGGCTAT GGTAGTAGTT ATAGTTGGTG 7200 CTACCATAGG GATTAAATTA TTCAAAAAGT TTACGAGCAA GGCTTCTTAA GCAATAGCGA 7260 AGAGGCCCGC ACCGATCGCC CTTCCCAACA GTTGCGCAGC CTGAATGGCG AATGGCGCTT 7320 TGCCTGGTTT CCGGCACCAG AAGCGGTGCC GGAAAGCTGG CTGGAGTGCG ATCTTCCTGA 7380 GGCCGATACG GTCGTCGTCC CCTCAAACTG GCAGATGCAC GGTTACGATG CGCCCATCTA 7440 CACCAACGTA ACCTATCCCA TTACGGTCAA TCCGCCGTTT GTTCCCACGG AGAATCCGAC 7500 GGGTTGTTAC TCGCTCACAT TTAATGTTGA TGAAAGCTGG CTACAGGAAG GCCAGACGCG 7560 AATTATTTT GATGGCGTTC CTATTGGTTA AAAAATGAGC TGATTTAACA AAAATTTAAC 7620 GCGAATTTTA ACAAAATATT AACGTTTACA ATTTAAATAT TTGCTTATAC AATCTTCCTG 7680 TTTTTGGGGC TTTTCTGATT ATCAACCGGG GTACATATGA TTGACATGCT AGTTTTACGA 7740 TTACCGTTCA TCGATTCTCT TGTTTGCTCC AGACTCTCAG GCAATGACCT GATAGCCTTT 7800 GTAGATCTCT CAAAAATAGC TACCCTCTCC GGCATTAATT TATCAGCTAG AACGGTTGAA 7860 TATCATATTG ATGGTGATTT GACTGTCTCC GGCCTTTCTC ACCCTTTTGA ATCTTTACCT 7920 ACACATTACT CAGGCATTGC ATTTAAAATA TATGAGGGTT CTAAAAATTT TTATCCTTGC 7980 GTTGAAATAA AGGCTTCTCC CGCAAAAGTA TTACAGGGTC ATAATGTTTT TGGTACAACC 8040 GATTTAGCTT TATGCTCTGA GGCTTTATTG CTTAATTTTG CTAATTCTTT GCCTTGCCTG 8100 TATGATTTAT TGGACGTT 8118

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 22 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: misc_difference
- (B) LOCATION: replace(5, "")
- (D) OTHER INFORMATION: /note= "S REPRESENTS EQUAL MIXTURE OF G AND C"

(ix) FEATURE:

- (A) NAME/KEY: misc difference
- (B) LOCATION: replace(6, "")
- (D) OTHER INFORMATION: /note= "M REPRESENTS EQUAL MIXTURE

	OF A AND C"	
	(ix) FEATURE:	
	<pre>(A) NAME/KEY: misc_difference (B) LOCATION: replace(8, "")</pre>	
	(D) OTHER INFORMATION: /note= "R REPRESENTS EQUAL MIXTURE	
	OF A AND G"	
	(ix) FEATURE:	
	<pre>(A) NAME/KEY: misc_difference (B) LOCATION: replace(11, "")</pre>	
	(D) OTHER INFORMATION: /note= "K REPRESENTS EQUAL MIXTURE	
	OF G AND T"	
	<pre>(ix) FEATURE: (A) NAME/KEY: misc difference</pre>	
	(B) LOCATION: replace(20, "")	
	(D) OTHER INFORMATION: /note= "W REPRESENTS EQUAL MIXTURE	
	OF A AND T" (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:	
AGGT	SMARCT KCTCGAGTCW GG	22
(2)	INFORMATION FOR SEQ ID NO:7:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 22 base pairs (B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:	
AGGT	CCAGCT GCTCGAGTCT GG	22
(2)	INFORMATION FOR SEQ ID NO:8: (i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 22 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single (D) TOPOLOGY: linear	
	(b) Toronogi. Illieat	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:	
AGGT	TCCAGCT GCTCGAGTCA GG	22
(2)	INFORMATION FOR SEQ ID NO:9:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 22 base pairs (B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9: .	
AGGT	CCAGCT TCTCGAGTCT GG	22
(2)	INFORMATION FOR SEQ ID NO:10:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 22 base pairs(B) TYPE: nucleic acid	
	,_, :::::	

(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:	
AGGTCCAGCT TCTCGAGTCA GG	22
(2) INFORMATION FOR SEQ ID NO:11:	
 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 22 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:	
AGGTCCAACT GCTCGAGTCT GG	22
(2) INFORMATION FOR SEQ ID NO:12: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 22 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:	
AGGTCCAACT GCTCGAGTCA GG	22
(2) INFORMATION FOR SEQ ID NO:13: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 22 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:	
AGGTCCAACT TCTCGAGTCT GG	22
(2) INFORMATION FOR SEQ ID NO:14: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 22 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:	
AGGTCCAACT TCTCGAGTCA GG	22
(2) INFORMATION FOR SEQ ID NO:15:(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 22 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single	

		(D) TOPOLOGY: linear	
	(ix)	FEATURE:	
		(A) NAME/KEY: misc difference	
		(B) LOCATION: replace(56, "")	
		(D) OTHER INFORMATION: /note= "N=INOSINE"	
	(ix)	FEATURE:	
	(,	(A) NAME/KEY: misc difference	
		(B) LOCATION: replace(8, "")	
		(D) OTHER INFORMATION: /note= "N=INOSINE"	
	12		
	(1X)	FEATURE:	
		(A) NAME/KEY: misc_difference	
		(B) LOCATION: replace(11, "")	
		(D) OTHER INFORMATION: /note= "N=INOSINE"	
	(ix)	FEATURE:	
		(A) NAME/KEY: misc_difference	
		(B) LOCATION: replace(20, "")	
		(D) OTHER INFORMATION: /note= "W REPRESENTS EQUAL MIXTURE	
		OF A AND T"	
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO:15:	
	,		
AGGT	NNAN	CT NCTCGAGTCW GG	22
		RMATION FOR SEQ ID NO:16:	
(2)		SEQUENCE CHARACTERISTICS:	
	(1)	(A) LENGTH: 38 base pairs	
		(B) TYPE: nucleic acid	
		(C) STRANDEDNESS: single	
		(D) TOPOLOGY: linear	
	, .,	CROUDINGS PROGRESSIVE ORD TO NO 16	
	(X1)	SEQUENCE DESCRIPTION: SEQ ID NO:16:	
CTAT	'TAAC'	FA GTAACGGTAA CAGTGGTGCC TTGCCCCA	38
(2)	INFO	RMATION FOR SEQ ID NO:17:	
	(i)	SEQUENCE CHARACTERISTICS:	
		(A) LENGTH: 30 base pairs	
		(B) TYPE: nucleic acid	
		(C) STRANDEDNESS: single	
		(D) TOPOLOGY: linear	
	•		
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO:17:	
	(111)	ongonion bhookillion. Ong in hovi.	
ACCC	יייאריי	TA GTACAATCCC TGGGCACAAT	30
AGGC	JIIAC	IN GINCANICCC IGGGCACANI	50
(2)	TNEO	DMAMION FOR CEO ID NO.10.	
(2)		RMATION FOR SEQ ID NO:18:	
	(1)	SEQUENCE CHARACTERISTICS:	
		(A) LENGTH: 32 base pairs	
		(B) TYPE: nucleic acid	
		(C) STRANDEDNESS: single	
		(D) TOPOLOGY: linear	
	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO:18:	
CCAC	STTCC	GA GCTCGTTGTG ACTCAGGAAT CT	32
(2)	INFO	RMATION FOR SEQ ID NO:19:	
. – ,		SEQUENCE CHARACTERISTICS:	
	· · ·	<u> </u>	

(A) LENGTH: 32 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:	
CCAGTTCCGA GCTCGTGTTG ACGCAGCCGC CC	32
(2) INFORMATION FOR SEQ ID NO:20: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:	
CCAGTTCCGA GCTCGTGCTC ACCCAGTCTC CA	32
(2) INFORMATION FOR SEQ ID NO:21: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:	
CCAGTTCCGA GCTCCAGATG ACCCAGTCTC CA	32
(2) INFORMATION FOR SEQ ID NO:22: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:	
CCAGATGTGA GCTCGTGATG ACCCAGACTC CA	32
(2) INFORMATION FOR SEQ ID NO:23: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:	
CCAGATGTGA GCTCGTCATG ACCCAGTCTC CA	32
(2) INFORMATION FOR SEQ ID NO:24:(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 32 base pairs(B) TYPE: nucleic acid	

<pre>(C) STRANDEDNESS: single (D) TOPOLOGY: linear</pre>	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:	
CCAGTTCCGA GCTCGTGATG ACACAGTCTC CA	32
(2) INFORMATION FOR SEQ ID NO:25:	
 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:	
GCAGCATTCT AGAGTTTCAG CTCCAGCTTG CC	32
(2) INFORMATION FOR SEQ ID NO:26: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 34 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:	
GCGCCGTCTA GAATTAACAC TCATTCCTGT TGAA	34
(2) INFORMATION FOR SEQ ID NO:27: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 37 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:	
GATCCTAGGC TGAAGGCGAT GACCCTGCTA AGGCTGC	37
(2) INFORMATION FOR SEQ ID NO:28: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 35 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:	
ATTCAATAGT TTACAGGCAA GTGCTACTGA GTACA	35
(2) INFORMATION FOR SEQ ID NO:29:(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 35 base pairs(B) TYPE: nucleic acid	

(C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:	
TTGGCTACGC TTGGGCTATG GTAGTAGTTA TAGTT	35
(2) INFORMATION FOR SEQ ID NO:30: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 35 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:	
GGTGCTACCA TAGGGATTAA ATTATTCAAA AAGTT	35
(2) INFORMATION FOR SEQ ID NO:31: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 18 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:	
TACGAGCAAG GCTTCTTA	18
(2) INFORMATION FOR SEQ ID NO:32: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:	
AGCTTAAGAA GCCTTGCTCG TAAACTTTTT GAATAATTT	39
(2) INFORMATION FOR SEQ ID NO:33: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 36 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:	
AATCCCTATG GTAGCACCAA CTATAACTAC TACCAT (2) INFORMATION FOR SEQ ID NO:34: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 35 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	36

(x1) SEQUENCE DESCRIPTION: SEQ 1D NO:34:	
AGCCCAAGCG TAGCCAATGT ACTCAGTAGC ACTTG (2) INFORMATION FOR SEQ ID NO:35: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 34 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	35
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:	
CCTGTAAACT ATTGAATGCA GCCTTAGCAG GGTC (2) INFORMATION FOR SEQ ID NO:36: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 16 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	34
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:	
ATCGCCTTCA GCCTAG	16
(2) INFORMATION FOR SEQ ID NO:37: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 21 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:	
CATTTTTGCA GATGGCTTAG A	21
(2) INFORMATION FOR SEQ ID NO:38: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 18 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:	
TAGCATTAAC GTCCAATA	18
 (2) INFORMATION FOR SEQ ID NO:39: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 26 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:	
ATATATTTTA GTAAGCTTCA TCTTCT	26

(2) INFORMATION FOR SEQ ID NO:40: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 23 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:	
GACAAAGAAC GCGTGAAAAC TTT	23
(2) INFORMATION FOR SEQ ID NO:41: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 35 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:	
GCGGGCCTCT TCGCTATTGC TTAAGAAGCC TTGCT	35
(2) INFORMATION FOR SEQ ID NO:42: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 43 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:	
AAACGACGGC CAGTGCCAAG TGACGCGTGT GAAATTGTTA TCC	43
(2) INFORMATION FOR SEQ ID NO:43: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 43 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:	
GGCGAAAGGG AATTCTGCAA GGCGATTAAG CTTGGGTAAC GCC	43
(2) INFORMATION FOR SEQ ID NO:44: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 36 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:	
GGCGTTACCC AAGCTTTGTA CATGGAGAAA ATAAAG	36
(2) INFORMATION FOR SEQ ID NO:45: (i) SEQUENCE CHARACTERISTICS:	

(A) LENGTH: 42 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:	
TGAAACAAAG CACTATTGCA CTGGCACTCT TACCGTTACC GT	42
(2) INFORMATION FOR SEQ ID NO:46: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 42 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:	
TACTGTTTAC CCCTGTGACA AAAGCCGCCC AGGTCCAGCT GC	42
(2) INFORMATION FOR SEQ ID NO:47: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 44 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:	
TCGAGTCAGG CCTATTGTGC CCAGGGATTG TACTAGTGGA TCCG	44
(2) INFORMATION FOR SEQ ID NO:48: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 38 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:	
TGGCGAAAGG GAATTCGGAT CCACTAGTAC AATCCCTG	38
(2) INFORMATION FOR SEQ ID NO:49: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 42 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:	
GGCACAATAG GCCTGACTCG AGCAGCTGGA CCAGGGCGGC TT	42
(2) INFORMATION FOR SEQ ID NO:50:(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 42 base pairs(B) TYPE: nucleic acid	

(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:	
TTGTCACAGG GGTAAACAGT AACGGTAACG GTAAGTGTGC CA	42
(2) INFORMATION FOR SEQ ID NO:51: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 42 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:	
GTGCAATAGT GCTTTGTTTC ACTTTATTTT CTCCATGTAC AA	42
 (2) INFORMATION FOR SEQ ID NO:52: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 21 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:	
TAACGGTAAG AGTGCCAGTG C	21
(2) INFORMATION FOR SEQ ID NO:53: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:	
CACCTTCATG AATTCGGCAA GGAGACAGTC AT	32
(2) INFORMATION FOR SEQ ID NO:54: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 22 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:	
AATTCGCCAA GGAGACAGTC AT	22
(2) INFORMATION FOR SEQ ID NO:55: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single	

(D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:	
AATGAAATAC CTATTGCCTA CGGCAGCCGC TGGATTGTT	39
(2) INFORMATION FOR SEQ ID NO:56: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:	
ATTACTCGCT GCCCAACCAG CCATGGCCGA GCTCGTGAT	39
(2) INFORMATION FOR SEQ ID NO:57: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:	
GACCCAGACT CCAGATATCC AACAGGAATG AGTGTTAAT	39
(2) INFORMATION FOR SEQ ID NO:58: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 13 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:	
TCTAGAACGC GTC	13
(2) INFORMATION FOR SEQ ID NO:59: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 45 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:	
TTCAGGTTGA AGCTTACGCG TTCTAGAATT AACACTCATT CCTGT	45
 (2) INFORMATION FOR SEQ ID NO:60: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	

	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:	
TGG	ATATCTG GAGTCTGGGT CATCACGAGC TCGGCCATG	39
(2)	<pre>INFORMATION FOR SEQ ID NO:61: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 39 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear</pre>	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:	
GCT	GGTTGGG CAGCGAGTAA TAACAATCCA GCGGCTGCC	39
(2)	<pre>INFORMATION FOR SEQ ID NO:62: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 37 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear</pre>	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:	
GTA	GGCAATA GGTATTTCAT TATGACTGTC CTTGGCG	37
(2)	<pre>INFORMATION FOR SEQ ID NO:63: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 30 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear</pre>	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:	
	CTGTCTC CTTGGCGTGT GAAATTGTTA	30
(2)	<pre>INFORMATION FOR SEQ ID NO:64: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 36 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear</pre>	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:	
TAA	CACTCAT TCCGGATGGA ATTCTGGAGT CTGGGT	36
(2)	INFORMATION FOR SEQ ID NO:65: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 24 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:	

GCCAGTGCCA AGTGACGCGT TCTA	24
(2) INFORMATION FOR SEQ ID NO:66: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 26 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:	
ATATATTTTA GTAAGCTTCA TCTTCT	26
(2) INFORMATION FOR SEQ ID NO:67: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 23 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67: GACAAAGAAC GCGTGAAAAC TTT	23
(2) INFORMATION FOR SEQ ID NO:68: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 76 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:	
CTGAACCTGT CTGGGACCAC AGTTGATGCT ATAGGATCAG ATCTAGAATT CATTTAGAGA CTGGCCTGGC	60 76
(2) INFORMATION FOR SEQ ID NO:69: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 80 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:	
TCGACCGTTG GTAGGAATAA TGCAATTAAT GGAGTAGCTC TAAATTCAGA ATTCATCTAC ACCCAGTGCA TCCAGTAGCT	60 80
(2) INFORMATION FOR SEQ ID NO:70: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 27 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:	
GGTAAACAGT AACGGTAAGA GTGCCAG	27

(2) INFORMATION FOR SEQ ID NO:71: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 54 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:	
CGCCTTCAGC CTAAGAAGCG TAGTCCGGAA CGTCGTACGG GTAGGATCCA CTAG	54
(2) INFORMATION FOR SEQ ID NO:72: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 41 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:	
CACCGGTTCG GGGAATTAGT CTTGACCAGG CAGCCCAGGG C	41
(2) INFORMATION FOR SEQ ID NO:73: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 51 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:	
ATTCCACACA TTATACGAGC CGGAAGCATA AAGTGTCAAG CCTGGGGTGC C	51
(2) INFORMATION FOR SEQ ID NO:74: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 42 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:	
CTGCTCATCA GATGGCGGGA AGAGCTCGGC CATGGCTGGT TG	42
(2) INFORMATION FOR SEQ ID NO:75: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 42 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear	
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:	
GAACAGAGTG ACCGAGGGGG CGAGCTCGGC CATGGCTGGT TG	42
(2) INFORMATION FOR SEQ ID NO:76:	

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

GGGCTTTTGC CACAGGGGT

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